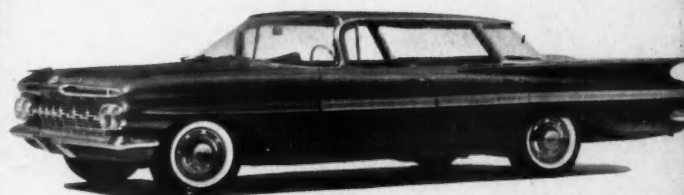


FACTS, FIGURES, FEATURES of ALL '59 CARS

MOTOR TREND

JANUARY 1959 350

WORLD SHOW ISSUE!





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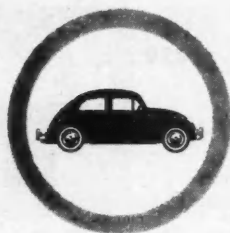
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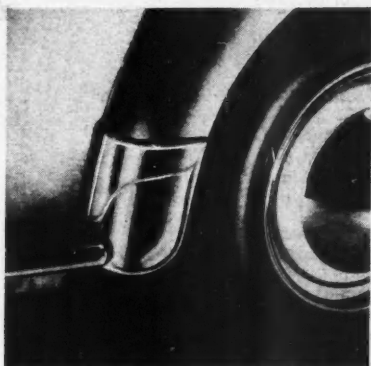
THE CAR
'59



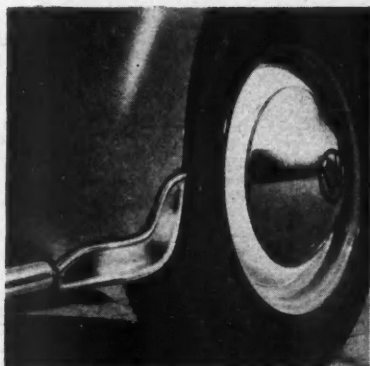


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ON FENDER EDGES...



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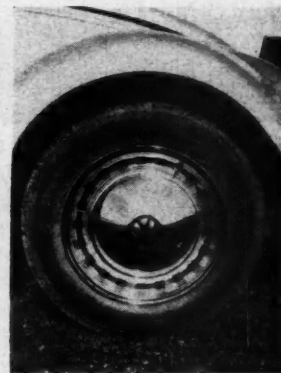
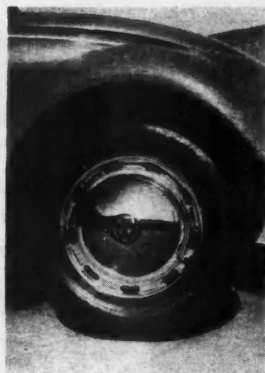
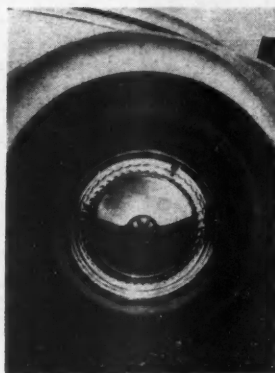
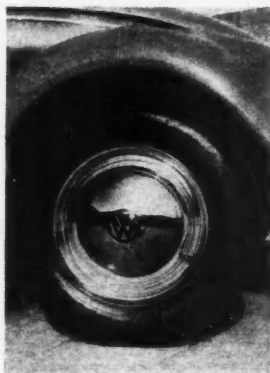


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visors to concentrate light on the road, particularly effective in fog. \$1.95 each.

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four types of wheel rings, priced from \$18.95* per set, give added flair to your car's lines.

Good taste and good quality are the twin standards for judging everything about your Volkswagen. No one knows this better than the men who make the car. These accessories are good examples—factory-approved, sold by authorized Volkswagen dealers, installed by factory-trained mechanics. They are just a sample of the dozens of items available to make owning your Volkswagen even more pleasurable. See them at your nearest authorized Volkswagen dealer's.

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JANUARY, 1959

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NEXT MONTH

Comparison Tests of
Chevy, Ford, Plymouth
Exposing Battery Frauds

MOTOR TREND

MOTOR TREND



THE COVER:

Pictured are the cars to watch in '59: the ever-popular low-priced three — Chevrolet, Ford, Plymouth; America's two compact cars — Studebaker Lark and Rambler; and the three leaders in imported car sales — VW, Renault, MG. Back cover—more '59s.

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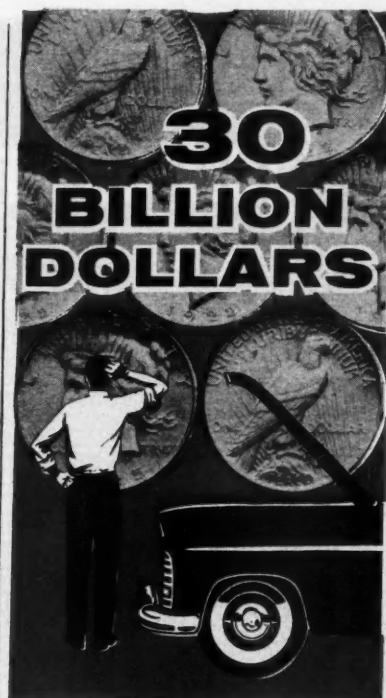
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ALL THAT MONEY WILL GO INTO CAR REPAIRS DURING 1959

AND YOU will have to pay \$425.31 according to a national survey unless you start avoiding costly repairs now with Wynn's Friction Proofing.

Oil spots on your garage floor can mean a leaking automatic transmission leading to a repair bill as high as \$150. A tapping in your engine indicates sticking hydraulic valve lifters and expensive repairs. Hard starting and rough idling means wasted gas and oil — sign posts of an engine tune-up, a carburetor job, or both.

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MOTOR TREND/JANUARY 1959 5

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MEMO

from the editor

World Show Issue

WHEN WE BEGAN the preparation of this Show Issue several months ago, we felt that it would be much more valuable to you if it included the technical facts and our opinions of *all* cars available in the car marketplace. It's like when you go to a grocery store: the fact that the food is on the shelves is the only matter of the moment; where the food came from is unimportant. And so, this—our third annual Show Issue—covers all cars that can be readily purchased in this country, regardless of *where* they are built.

If your primary appetite for information on Detroit-built cars is not satisfied (and we hope it isn't!), you may have only secondary interest in the imports. On the other hand, the fact that they hold seven per cent of the total car market, and are generally being predicted to rise above this in '59, is interesting from both economic and technical viewpoints.

Some of the reasons for their popularity may become apparent to you as you compare their features against those cars that Detroit now offers. As you browse through the marketplace, you will find that each of the imports falls into a certain category, and also that many of our domestic cars fit these same classifications. All imports can no more be considered "sports-cars" than can all domestic cars be classed as "family cars." It is interesting to note, however, that you can find cars from both sides of the Atlantic (and the Pacific) in each of these classifications.

On page 28 you will find the first category of "Family Cars—a price and size for everyone." Following that are the other categories of: "Sportscars—for the dollar-conscious," "Sportscars—where dollars are unlimited," "Compact Cars—not too big, not too small" (encompassing cars with 100-110-inch wheelbases), "Luxury Cars—where price for prestige is no object," "Economy Cars—for the budget-minded," and "Gran Turismos—a touring car with sportscar flair." (Incidentally, if you're interested in a further comparison of Gran Turismo cars, the relative merits of a Lago America and a Plymouth Sport Fury are discussed on page 82.)

We hope you find what you're looking for.

Robert A. ...

What kind of a car do you want, exactly? Chevrolet has a choice of nine engines, five transmissions, two suspension systems, regular or Positraction rear axles, special cams, solid or hydraulic valve lifters, two air-conditioning systems, even Fuel Injection—the list of extra-cost options is tremendous. But what it means is that you can virtually design your own car, tailored precisely to your needs. Here's just one example:

"I 'built' my Chevy for top economy—and extra easy running at 300 miles a day."



"As a traveling salesman with a big Midwest territory I rack off about 300 miles a day—and, boy, how I love gas economy. But I like all the comfort I can get, too, so I'll be rested when I make my next call.

"I used to wish I could design my own car, until this year. That's when my on-the-ball dealer friend showed me how I could 'build' just the right car out of Chevy's terrific list of options. Look what I got:

"I picked a Biscayne two-door, 'cause I pay for my own auto and that's right at the base of the price list. A Hi-Thrift 6 engine—that's the world's best workhorse. And Over-

drive; with that high ratio you can just whisper down the road at good fast cruising speeds. No fuss, no strain, hour after hour. And that gas needle just *never* seems to go down!

"Then I pampered myself a little bit. Foam rubber padding in the seats (I'm a big guy and I spend hours at the wheel); Chevy's new throttle-holder where you just set your cruising speed for those long straights and the car holds it while

you rest your right foot. And the big 'fresh-air' heater, too—the winters get real rough in my country and, besides, that air coming in from the outside keeps you alert on the real long hops. Man, you should drive my car. It fits me like a glove!"

There's something to figure on, friends. Whatever kind of car you want—sports car, salesman's car, town car—you can "design" it for yourself. We aim to produce cars for *any* taste and *any* kind of use. But check your Chevrolet dealer and see how you can suit yourself to a T. . . . Chevrolet Division of General Motors, Detroit 2, Michigan.



JUST OUT! FREE CATALOG

SAVE 20 to 60%
on Speed, Power, Mileage,
Custom Equipment—
For All Cars!
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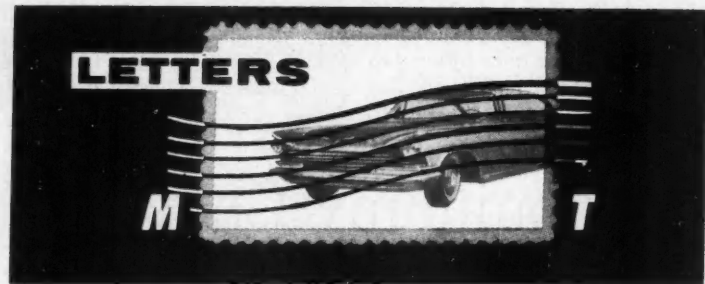
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Competition!
174 in 1/4 Mile!

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DRAGGIN'
OR THE
STREET
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15"
16"
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THE '59S ARE NO BETTER?

Dear Editor:
Congratulations to Detroit—they've done it again! The curtain has been raised, and the 1959 "Chromites" have cluttered up the stage once more.

As usual, the first performance is filled with we curious American spectators, myself included. Unfortunately, however, the receipts at the end of the season will show another decline in the sales, due mainly to the same boring old-time actors dressed up in fancier garb.
David Beck

Los Angeles

Dear Sir:

There is no field of automobile performance where the Detroit automobile reigns supreme—only in size and outward glamor. Futuristic appearance is no substitute for reasonable economy and efficiency, easy parking, good roadholding, and good appearance and construction.

It is unfortunate that the British industry is largely represented by the smaller and more utilitarian vehicles in your market and that the cars really competitive with Detroit, such as the Rover, Wolseley, Riley, etc. are not much in evidence.
L. A. Saunders Portsmouth, Hants, England

Gentlemen:

A couple of years ago, I started to write to you and suggest that GM just start making their Cadillacs in five sizes and price ranges

and forget their other brands. Well, now they have just about accomplished this—except they insist on keeping their brand names and selling them all at Cadillac prices!
Ronald E. Freeman Reidsville, N.C.

Gentlemen:

My choice of a 1959 automobile is rapidly being narrowed down as the new cars arrive on the scene. I have tried the Buick, Oldsmobile, Pontiac, and Rambler.

What good are all the fancy engineering advances, when the driver or passenger can't even ride in the car? In the GM cars, my head hits the headliner on some models and pushes against the metal roof in others. The back seat? That is impossible! I am six feet three inches tall, which is not at all uncommon.

The Rambler gives more headroom than GM models, and the seats are at least at a height that is comfortable for a tall person to sit in and drive. I can understand why the sales of the Rambler have increased—they build a car that the American public can feel comfortable in.
William L. White Medford, Ore.

Dear Sir:

It seems strange that even though statistics prove that man is getting taller and taller, the manufacturer keeps making cars lower and lower.
J. W. Brown Somerdale, N.J.

BIGGER—NOT BETTER!

Editor:
I wanna buy eight yards of car.
I will not buy one shorter.
I smoke a very long cigar
And cannot in a sporter.
Battell Loomis Manhattan Beach, Calif.

STOP COMPLAINING!

Dear Mr. Woron:
I'm awfully tired of people continually knocking our own American makes, and I wish they could ask some of the folks in Europe how they like our automobiles, as I have. Some Americans might be surprised, but the Europeans think our 1956 Chevy 150 four-door sedan is quite out of this world.
Bill Schwehne APO, San Francisco, Calif.

YOU WOULDN'T DARE!

Dear Mr. Woron:
I would like to protest George Barris' handling of his custom cars column. Ever since he became MT's custom editor, the only cars given any decent amount of space are those built by Mr. Barris himself, or carbon copies of his design theories, if he has any. In this way, he has created a monopoly in the custom car industry, and the general public is made to suffer, because the only part of customizing we ever get to see are

the monstrosities which Mr. Barris wants us to see. I dare you to print this.
Steve Handzo Clifton, N.J.

Readers with strong personal preferences in customizing will be interested in a long-planned series of articles on individualized custom design starting in next month's MOTOR TREND.—Ed.

I'M CONFUSED

Dear Sir:
Your comparison of the Big Three in the November issue was most interesting, but it left me a little confused about Ford's air suspension. You say it was withdrawn, but you describe its value. My dealer says it is not available. Is he right?
E. T. Evans La Canada, Calif.

The test chassis we saw in Detroit most certainly had air level rear suspension. We were impressed by its simplicity and the new nylon air line feature. As we went to press we were notified by telegram that this feature had been withdrawn from 1959 production, but still thought it worthy of mention.—Ed.

CORRECTION

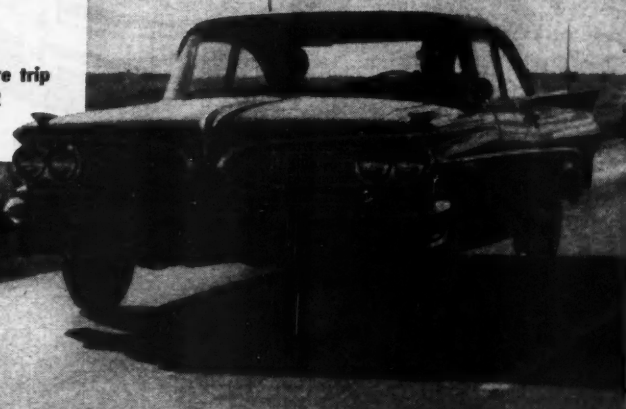
Through a typographic error, the date of Mike Hawthorn's French Grand Prix victory ("Wheel-to-Wheel GP," page 34, December MT) was given as '58. The correct date is '53.—Ed.

COAST TO COAST ONLY 1½ CENTS PER MILE FOR GAS!

Pontiac's new Tempest 420E V-8 sets the year's most important economy mark—Here's the story and what it means to you!

PONTIAC COAST-TO-COAST ECONOMY RUN *San Diego, California to Savannah, Georgia* COMPLETED OCTOBER 17, 1958

DISTANCE	2,442.7 MILES
DRIVING TIME	60.72 HOURS
FUEL CONSUMED	112.5 GALLONS
FUEL COST	\$35.79
MILES PER GALLON	21.7 Average for entire trip
AVERAGE SPEED	40.2 MILES PER HOUR
COST PER MILE	1.465 CENTS



We asked one of America's most respected car testers—"Uncle Tom" McCahill—to put a standard Pontiac Catalina Sedan with our new economy V-8 to the test.

And with only one specification—that the run would be exactly like *you* would drive coast to coast yourself—in mountains, in city traffic, across deserts, buying gas wherever the tank ran low.

And here's the phenomenal story in every complete detail—all officially certified by NASCAR, America's top automobile competition authority.

What does it mean to you?

Simply—and very importantly—this: For the first time, you can get deep-chested V-8 pep with better mileage than from many smaller so-called "economy cars" . . . and get it on regular fuel!

If you owned a Pontiac with this new Tempest 420E V-8 you'd be saving up to 5 cents a gallon on regular fuel. This new economy V-8 is optional at no extra cost on any Hydra-Matic Pontiac!

See your Pontiac dealer soon—and discover the newest in V-8 performance and economy!

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MOTOR TREND/JANUARY 1959 9

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FOR
'59

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All aluminum block and gear case with steel inserts for more power and lighter weight. Torsion proof, backbone sports chassis with independent trans-axle four wheel suspension for greater comfort and road-holding safety . . . Tomorrow's engineering—today's smart contours and spacious interiors blended with a host of yesterday's experience combine to make the ŠKODA America the World's Light-heavy-weight Champ! and the car you will most enjoy driving!

Over 35 miles per gallon and cruises in the high 70s—ŠKODA America truly brings tomorrow to you today!

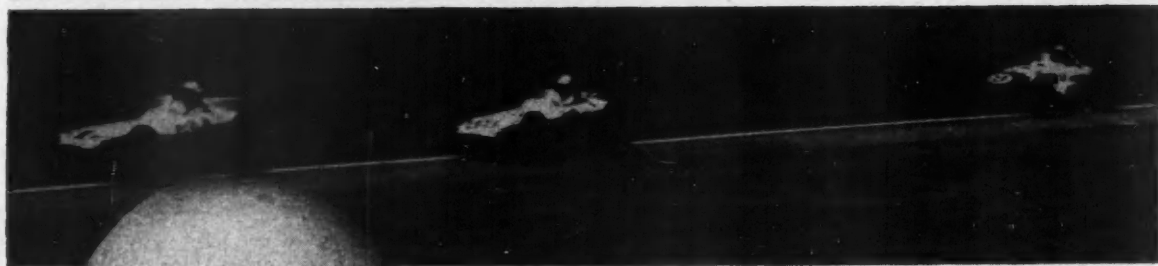
EACH CENTURY HAS CHARACTER OF ITS OWN. . . As modern as tomorrow—here for your driving pleasure today—the new ŠKODA America brings a century full of yesterday's steel making experience blended and distilled by automotive masters. . .

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440

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The real test of the ability of a brake lining to lick its two most dangerous enemies—heat and wear—is the 500-mile race at Indianapolis. In that brutal 4-hour grind, where speeds reach 170 mph, each driver hits his brakes about 500 times. Only the very finest lining—lining designed by the industry's foremost engineers and manufactured from truly premium materials—can always be depended on to respond instantly and positively. That's why Jimmy Bryan, George

Amick (runner-up), Johnny Boyd (third), and every other driver who went the distance insisted on Raybestos Brake Linings.*

Why not be guided by the men who stake their lives on their brakes. Like them, you will get the one lining that licks heat and wear brake problems and assures you swift, smooth, silent stops every time. See your Raybestos dealer soon for the famous Raybestos 7-Point Brake Check . . . it includes adjustment.

*Certified by the United States Auto Club

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Enjoy your own set of three 8 x 10 photos of Bryan, Amick, Boyd and their cars. Simply send \$1.00 (to cover handling and postage) to Raybestos, with your name and address.

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AMERICA'S BIGGEST SELLING FRICTION MATERIAL



THE RUMOR MILL

"Ford will bring out a \$2000 version of its two-place T-Bird later this year."

FALSE—This sounded like a reasonable rumor and was given considerable play by those who check with the source of rumors and not the subject of the rumor. Word from the horse's mouth is that it just ain't so. If there's a switch, we'll become the other end of the horse.

"Checker will release a 1959 passenger-car version of their famous cab."

TRUE—Production of a new Superba model was scheduled to start in December, at a rate of 100 units per day. As predicted in April '58 MT, it will have a six-cylinder (140-hp) engine and retail for about \$2350 in standard, stick-shift form, and for about \$2500 with power equipment. Reports are that the 200-inch-long Superba will have wrap-around windshield, dual headlights, distinctive grille and chrome trim as distinguishing features.

"A new process has been developed for welding stainless steel to carbon steel, which may influence the use of stainless in future car designs."

TRUE—But this is not a new process. The job can be done by spot-welding without injuring the anti-corrosion properties of stainless. Process was demonstrated recently in Detroit. It could affect car styling, such as stainless roof for T-Bird, à la Chrysler Imperial.

"American car makers may switch back to four-cylinder and six-cylinder engines in the future."

POSSIBLE—Sixes, where available, have proved very popular even in current cars. A spokesman for one of the Big Three companies was quoted recently in usually reliable *Automotive News* as saying the industry would go more strongly for sixes and probably make fours available again. Advent of aluminum engine may speed this development.

"Stainless steel exhaust systems will make their appearance in some 1960 cars."

IMPROBABLE—Vanishing American exhaust systems have been a bane for the

past several years with life expectancy running around eight to 12 months. Stainless steel systems which last the life of the vehicle have been used in some truck installations. Recently Jack Cudlip of McLouth Steel showed MT an installation on his personal Mercury which provided a lovely mellow exhaust tone. It weighs only three pounds, or half the weight of the regular muffler. It, too, would last the life of the car. Trend now is toward aluminized systems and we don't expect to see this supplanted in 1960.

"Kaiser-Willys is unhappy with Studebaker using the name Lark on its small car. Willys once had a Lark."

FALSE—Kaiser-Willys has withdrawn from the passenger car field in the United States and will stick with its line of specialized and off-the-highway vehicles. Willys at one time also had a model called the Belvedere, which Plymouth now has.

"Chrysler Corp. will switch to unitized body construction."

VERY PROBABLE—Information here is that this program is well under way and they will probably make the change next year. Unitized body construction is not new to Chrysler—the DeSoto and Chrysler Airflow models built in 1934 used it.

"Fuel injection is a dead duck so far as its use in future passenger cars is concerned."

FALSE—While all companies with the exception of Chevrolet shied away from the use of fuel injection for 1959, development work is still continuing and 1960 will see it on the way back. The trend will be toward the mechanical units instead of the electronic types offered by Chrysler last year.

"A new passenger car tire made completely of butyl rubber will soon be available to the general public."

TRUE—All-butyl tires were developed in the fall of 1956 and were approved for use on military vehicles about one year later. They will be offered to the general public during the next 12 months. Many advantages are claimed for butyl tires.

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MOTOR TREND/JANUARY 1959 11

SPOTLIGHT ON



by Bill Callahan Detroit Editor

WHERE WILL CAR STYLING GO from here? It's hard to say, but if one industrial designer has his way, it will be placed squarely in the laps of the auto stylists, for he "... is the best man to apply the rules [of good design], and should be allowed to do so without interference from well-meaning executives, or eager sales managers." This quote is taken from a speech made by Carl Sundberg (Pres., Sundberg-Ferar, Inc.) before the American Society of Body Engineers in Detroit in late October. Mr. Sundberg is an industrial designer and was asked for his opinions of the 1959 cars. We are taking this opportunity to excerpt from his speech in the belief that what he had to say is of interest to consumer and manufacturer alike.

"**THE AUTO STYLIST,**" he says, "has the most difficult styling assignment in the world. He has been the most maligned man in the design profession. He has been a target for publicity-seeking industrial designers, smart-alec writers and design critics, both professional and amateur, who want to establish their own good taste by sneering at auto styling ... Panning the American automobile has become a pastime that threatens to replace baseball as a national sport."

SUNDBERG THEN QUOTES from the book, *The Insolent Chariots*, by John Keats, who he says has come up with some unusual slants, one on sex. Quoting from Keats, "Detroit was certainly not blind to this [sex], and responded not only by putting a dream girl in every ad of a dreamboat, but also by building deliberate sexual symbols into automobile designs in the expectation that the car's outward shape would precisely represent the shape of the customer's sexual peculiarity." Sundberg deplores the fact "... that the auto industry has allowed itself to become vulnerable to attack by a professional brick-thrower such as John Keats, because there is much truth in [his book]."

TO GET A CROSS-SECTION of opinion from the best industrial designers in the business, Sundberg contacted them personally and asked for their views on the '59 cars. One of the first was

Henry Dreyfuss, who said, "It has always been my belief that if Detroit designers are left to their own resources, instead of being beaten about the ears by frightened sales engineers, a good design might well be forthcoming ... It is only when the lily is gilded with chrome and strips of plastic that the [excellent clay form] is distorted and ruined."

CARL BJORNCRANTZ, CHIEF DESIGNER for Sears, Roebuck & Co., told him, "The automobile designer—to make a real contribution—must have the opportunity to design, not to delineate a fantasy that the sales manager, or some dealer in Podunk, insists will sell!"

DAVE CHAPMAN, PRESIDENT of the Society of Industrial Designers and of his own company, told Sundberg, "Detroit is making a desperate attempt to retrace its steps out of the chrome jungle and rebuild the desire of the consumer for the product offered in the marketplace. We see a slight change in the philosophy of styling, but have not yet seen even the slightest indication that the concept of design for a really improved unit of transportation has filtered up to the levels of top brass who make the ultimate decisions in the automobile industry."

DESIGNER WILLIAM GOLDSMITH wrote, "We see definite improvement in the new General Motors line. But to say that the '59 models are improved over

'58 is granting doubtful honors; styling wasn't very good in '58."

MONTGOMERY FERAR, of Sundberg-Ferar, told his partner, "The emphasis on car styling remains on the tail lift, instead of the face lift. Many of the new front ends seem to integrate well with the whole body, but the rear end seems to be overworked ... One of the great problems in using a common body shell is that one of the cars must be the original prototype. In GM the Buick arrives at the integrated appearance; it looks as if it was designed as a whole package. Consequently, the other cars in the line have to force the front and rear ends into the same contours and yet obtain a different identity."

"**THERE SEEMS TO BE AGREEMENT,**" says Sundberg, "among designers that with a couple of exceptions, the year 1958 was one of the saddest years in the history of auto styling. All of the cars that we feel are improved have one thing in common—less chrome—or at least a more tasteful use of it ... It is a known fact that there is more design talent concentrated in the auto studios of Detroit than anywhere else in the world. Isn't it strange that this talented group can excel at creating good shapes and often fail so miserably in applying tasteful trim?"

"**THE RULES OF GOOD DESIGNING,**" Sundberg continues, "are just as clearly defined as those of good engineering."

continued on page 14



When Ford announced a '59 model called Galaxie, visions of this namesake dream car were conjured up, but when the actual model was unveiled this month (turn the page) ...



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SPOTLIGHT ON DETROIT

continued

There is a right and a wrong way, just as in engineering . . . Only good design can succeed, because, believe it or not, most of the people, rich and poor, have much better taste than they are given credit for. They proved this when they refused to buy the 1958 models . . . The unfortunate part of all this," Sundberg concludes, "is that none of what I have said is fresh news to the auto designer. He has heard it over and over, and let me assure you, he knows what's wrong. Given the proper authority, he can remedy the faults."

LITTLE OR LIGHTER—that is the question.

While Detroit car makers still ponder whether car buyers want more compact economical cars or not, aluminum makers are losing no time in trying to convince them that they can make present-day cars of aluminum that will both weigh less and cost less. A. D. Reynolds and John Blomquist of Reynolds Aluminum Sales Co. came up with some rather convincing arguments just prior to the meeting of the American Society of Body Engineers here in late October. Both argued that cost-wise aluminum had advantages because of lower machine costs, providing designs take advantage of these properties.

SOME VERY INTERESTING PIECES were included in the Reynolds' exhibit. One was an integral brake drum and wheel in which the hub, spider or spokes, and brake drum were included in one casting. The drum has a cast iron liner and the wheel rim is attached to the spider by eight rim bolts. This wheel was designed by Kelsey-Hayes and takes us back to the old days of demountable rims. The aluminum wheel and drum is said to facilitate heat dissipation, providing cooler brake operation with less tendency to fade. It also reduces weight, since in addition to the lower weight of aluminum, the spare requires only a rim.

OTHER ITEMS in the Reynolds display were: an aluminum bumper with integral grille, which is a casting that requires a minimum of machining, and which Greyhound buses have been using for the past 10 years; a hood with integral grille and cowl vents; and an integral rear quarter panel with cast-in stiffening members. Press members also were shown a model of the GM V8 aluminum engine announced recently. Reynolds said use of aluminum could cut car weight materially when used in engines, transmissions and body parts.

SLOPPY WORKMANSHIP, poorly fitting doors, trim, hoods and trunk lids have been the bane of new-car buyers in the postwar years. Door handles came off, window controls failed to work, unusual squeaks developed, transmissions and rear ends leaked oil. A representative of one company told us that his company was lucky not to have been building boats in 1957 or it would have drowned half of its customers. It is said that some owner complaints resulted from actual improvements in cars—when the engines became quieter, body noises became more noticeable, and when bodies became quieter, engine noises became more noticeable.

THE ALIBIS SHOULD BE OVER, for the industry has moved in with a set of scientific studies that have shown results and should improve as weaknesses are revealed. Milo Dean, manager of Ford Division Quality Control, told us: "We were first struck with the fact that we had no scientific measurement for the quality performance of our widely scattered assembly plants. It was simple to tell whether plants were producing the expected number of cars—we could count them. We could measure cost performance by counting dollars. But there was no objective way of evaluating quality performance."



... Galaxie turned out to be a plush Fairlane 500 series model with a Thunderbird roof, costing \$48 more, in six styles including sedan, convertible, and retractable hardtop.

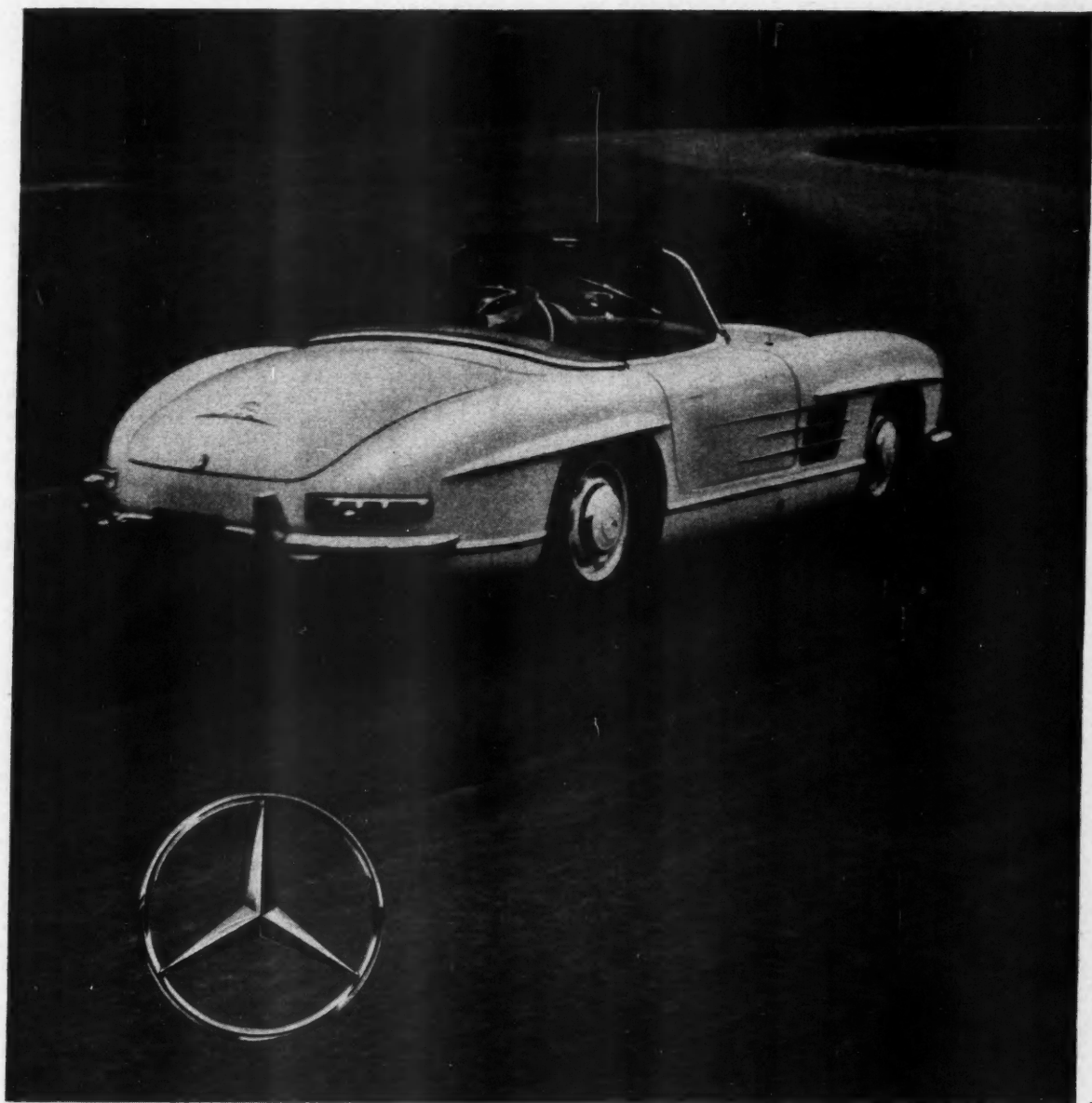


QUALITY AUDIT TEAMS were then established in each Ford plant. These teams report directly to the plant quality control manager. A certain number of cars are taken at random from the convoy yard where vehicles are assembled, ready for shipment to the dealer. The teams subject these cars to 1560 visual and operational checks. A complete car audit requires about three man-hours.

ROAD TESTS ARE THEN CONDUCTED over a prescribed route under varying driving conditions to check performance characteristics such as engine starting, idle, acceleration, handling qualities, noise level, riding qualities, operation of brakes, clutch, transmission, etc.

A PANEL OF 80 DEALERS selected by geographical regions contribute a further check. These dealers submit copies of all repair orders on cars coming into their shops for adjustment or repair. Analysis of repair orders may reveal weaknesses in materials, designs, processes or assembly procedures which contribute to failure, or unsatisfactory performance in owners' hands. Corrective steps are taken immediately. In some

continued on page 16



Drifting along in a four wheel slide or driving docilely into town to shop, the 300 SL always provides the maximum in enjoyment and safety. Its fuel injection engine is so tractable, the car can accelerate smoothly from 15 mph to top speed in high gear. Its new, spring compensated, low pivot point swing axle provides a new experience in stable cornering and control. By dint of ancestry and inherent quality, the 300 SL Roadster is the proudest sports car in the world. Behind its wheel, you'll be the proudest driver.

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SPOTLIGHT ON DETROIT

continued

cases difficulties may result from operation in a given geographical area as shown by these reports, but remedial measures are applied to all units.

THE GENERAL MOTORS' SYSTEM, while varying somewhat in detail from the Ford program, is based upon the idea of setting a yardstick of quality. It provides for immediate remedial action. Sylvester J. Thrasher, manager of Quality Control at Chevrolet, explains the GM program as a constant effort to assure that every owner gets maximum satisfaction from his car. With 10 assembly plants located in 22 manufacturing areas and with 3800 "outside" suppliers contributing parts and material, this boils down to an enormous job of communication. "We have cut the time required for dissemination of information to all of our plants to less than 24 hours," says Thrasher.

"THIS IS IMPORTANT," he continues. "We maintain crews at each plant to constantly spotcheck cars as they are completed and ready for shipment. These checks include visual and operational checks, road tests and measurements to see that all components are working in line with specifications for them. We also maintain central office crews to double-check the plant crews. Sometimes, however, we find items that go wrong only in isolated cases. This information is passed on to suppliers, assembly plants and to our dealers with recommendations for remedial action. Our engineers, research people, designers, testers and assembly plants make every effort to select materials and designs and to develop processes that blend into a good final product. In the long run the customer is our final test driver and the car must operate to his satisfaction."

CHRYSLER'S PROGRAM was inaugurated this year and has had little chance to prove out in practice up to now. Ford's program got underway in 1957, while GM and Chevrolet have been working toward this end since 1955. The industry as a whole is seeking a practical, business-like method of records and reports resulting from measuring, analyzing and controlling variables in a process or procedure for the purpose of maintaining a pre-determined level of quality performance. The pre-determined levels are specifications of an operation or functions of a product which have been established through years of research and experience by Production Engineers. Quality Control is a much needed, and somewhat belated, step in the right direction. /MT



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Anyone who enjoys reading about sportscar and Grand Prix drivers should derive great pleasure from Hans Tanner's authoritative *Great Racing Drivers of the World*. The book is essentially a series of biographical sketches which briefly detail the lives and careers of 37 men from Ascari to Villorosi. Included are old-time greats and those who have made names for themselves in the past few years.

The author, who has known and managed many of the drivers he depicts, touches on each man's background, his temperament and style, and then describes the subject's most exciting races.

More than 80 photos, mostly action shots by some of Europe's leading race photographers, are included in the 128-page book.

As the latest in the Modern Sports Car Series, this interesting volume is priced at \$2.75 and is available from Arco Publishing Co., 480 Lexington Ave., New York 17.

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Imported car enthusiasts never seem to get enough of road test reports. Some of the most elaborate and informative in the world are those published in *The Motor*, England's highly popular weekly automotive magazine which annually reprints a year's tests in one soft-cover volume.

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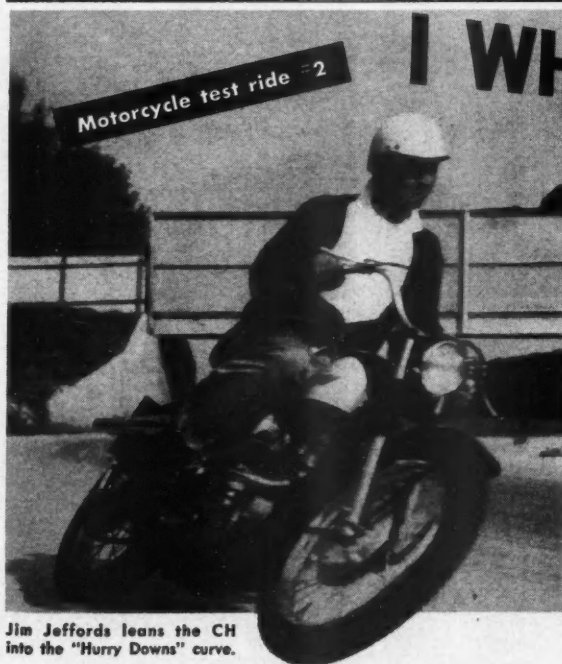


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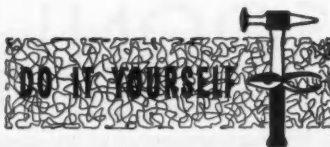
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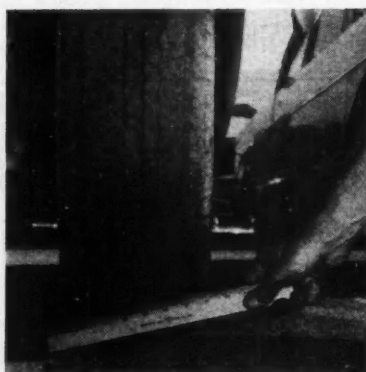
TIRED TIRES

Photo Story by Steve DaCosta

SIX PRINCIPAL TIRE CARE RULES will save you a world of headaches and may help avoid damage suits resulting from accidents caused by poorly-cared-for tires:

1. Begin with a close look, right now, at the tires on your car. Best place for a tire that has no tread left is on a trash pile.
2. If tread is substantial, look for uneven wear, bruises from curbs or rim cuts. Worn or bald spots are caused by wheels out of alignment. Have wheels balanced and aligned at a reputable shop as soon as off-center wear is noted.
3. Switch tire position every 4000-5000 miles, using spare. Bring front wheels straight back to rear on same sides, put spare tire with best of rear tires

on front, and put most worn tire in spare compartment. Repeat this procedure on next change. 4. Buy a tire gauge (around \$1 to \$3) and check pressures often, especially before and after long trips. Remember that under-inflation—regardless of how "smooth" it makes your car ride—is the worst enemy of tire life. A consistently low tire will live only 80 per cent of its life expectancy. 5. Refrain from hitting curbs or other obstructions when parking; this is the major cause of wheel misalignment. 6. Drive in slow lanes if tires are old and you haven't got around to new or retread replacements. And even if tires are new, take "cooling-off" periods on long and fast trips.



Laying a ruler across tire tread will reveal wheel imbalance or misalignment. Smooth, uneven wear spots show need for adjustment.



An inexpensive tire gauge is a good investment to prolong tire life. Inflate to factory-recommended pressures and check regularly.



When switching tires, inspect closely for any bruises, cuts on sidewall. A screwdriver will easily pry out objects caught in tread.



Pliers should be used to take out nails or tacks. When these are removed, judge depth penetration, listen closely for escaping air.

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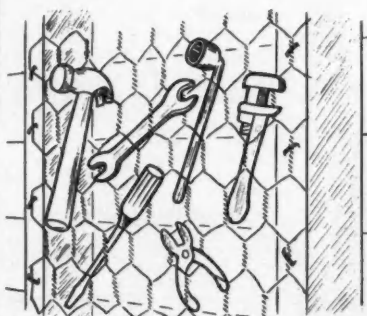
GUMOUT DIVISION Pennsylvania Refining Co., 2672 Lisbon Road, Cleveland 4, Ohio

HANDY hints

by Roger Darling

EVER-PRESENT SNOW SHOVEL—When bogged down in snow you'll find it easier to break through or rock out if you shovel a path four feet or so *ahead* of each wheel (especially the front ones, where most resistance is). No shovel? One of your hubcaps will serve as a digging tool in an emergency.

HANDY TOOL HOLDER—To keep a few important garage tools right at hand—in plain



sight yet out of the way—simply staple a piece of chicken wire between two studs as shown and hang or "lace" the tools in place.

QUICK CHOKE CHECK—The automatic choke is such an intricate marvel that freezing weather often upsets it, making choke trouble a major cause of winter starting failure. Some cold morning when your engine won't catch or, once started, won't stop racing, check the choke: Remove air cleaner (*this* may solve your problem—screwed on too tight, air cleaner can bind choke valve). Look down carburetor throat. The choke valve (that top metal disc) should be CLOSED on cold engine, OPEN on hot. If stuck, try to "free-up" by hand (take it easy). If frozen, squirting in a little solvent (gas, Gumout, etc.) may help—never oil. Sticking, made worse by cold, indicates need for cleaning.

DO IT NOW—As soon as you read this, squirt a few drops of penetrating oil or other rust-busting solvent on your license plate bolts. Then, when removing them in January to mount your '59 plates, you'll save time, skinned knuckles, and bad words usually directed at those rust-frozen bolts.

FORGOT YOUR ANTI-FREEZE?—A sudden cold snap and a car with insufficient anti-freeze could add up to a frozen radiator. If you are caught in this predicament, slip a flattened paper shopping bag in front of the radiator to retain engine heat and prevent the water from freezing until you get prompt and proper anti-freeze protection, after which the paper should be removed.

**"THE MONEY-SAVING WAY TO MAKE YOUR CAR
GLITTER AND GLEAM AGAIN" — CAR LIFE MAGAZINE**

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ROD & CUSTOM Magazine, New Products Test, April, 1958:
"Speedplater not only can be used to restore scratched, worn or blistered chrome on any part of your car, but can be used to plate metal not chromed before... For those wishing to plate their own items right at home without having to depend upon a commercial chrome shop, we'll vouch for the Speedplater's doing the job by saying that it works exactly as described, giving a lasting, durable, bright coating."

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Now you can add to your income during spare-time hours... because 8 out of 10 cars on the road today **NEED RE-PLATING**. You can charge \$5.00 for touching-up to \$50.00 for replating an entire car.

Plating is fun, too! You'll get a kick out of taking rusted, pitted, worn metal and bringing it back to shining smoothness. When neighbors see the brilliant plating on your car, they'll want you to do the job for them.

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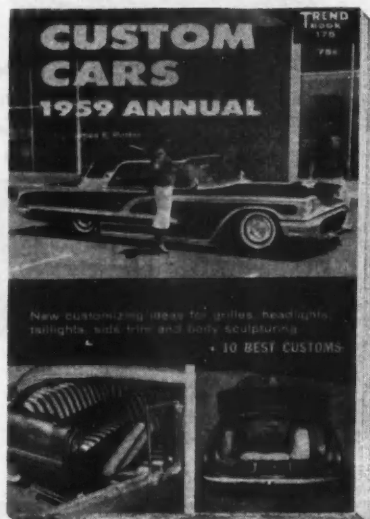
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Conducted by CHARLES NERPEL Technical Editor

WHAT'S YOUR QUESTION? CHECK WITH CHUCK

"Is engine swapping practical?"

MORE THAN A FEW LETTERS cross our desk every day asking about installation of engines in chassis for which they were not intended. Just about any engine can be put in any chassis. This does not mean that it is easy or even practical, but it can be done. There are some swaps that can be made as simply as replacing the stock engine—others require cutting, new mounts, adapter plates to transmissions, and relocating exhaust and steering systems.

MOTOR TREND has among its advertisers, manufacturers and distributors of engine mounts and adapter plates for just about any type of engine-chassis-transmission wedding, with the possible exception of an Allison engine in a Crosley.

A wonderful guide to the practical side of engine swapping is contained in a book by the same title published by Lockart, Inc., 3607 W. Magnolia Blvd., Burbank, Calif. (\$3). Most practical conversions from 1949 up to and including the 1959 models are outlined, including the availability of mounts and adapter plates. This book has saved us a lot of time in researching conversions, and anyone planning engine swaps would do well to consult its pages.

"Will a supercharger hurt my engine?"

HARMING AN ENGINE by power-increasing modifications is a matter of relativity. Automotive engines are generally built with a fair margin of allowable overload. Some engines, especially "new" models, are built to be factory-modified over a period of several model change years. Small-displacement engines, such as Volkswagen, Renault, etc., are rather limited in their overload factor. This does not mean that supercharging will ruin them, but it will shorten their lives by putting excessive loads on bearings and crankshafts.

Use can determine the life of an engine, with or without hop-up accessories. If an engine is operated at maximum continually, it will not last as long as one run within reasonable load and rpm limits, with occasional bursts of high rpms or high supercharger manifold pressures. Many owners make a serious mistake of adding superchargers to an engine that has been well thrashed at constant maximum performance by a driver who then decides he has to have more power. Often the supercharger is blamed for an engine failure that was caused by many miles of abusive driving before the blower was installed.

New or old, large or small engine, if you decide on a blower, have bearings, wristpins, rods, pistons and crankshaft checked or refitted. Magnaflexing a crank can save a lot of broken cases and expensive repairs.

"What carburetors are closest to fuel injection?"

YEARS AGO, when S. U. (Skinner's Union) and Amal developed their respective sidedraft carburetors, they had no idea how close they were to some of the modern so-called "fuel injectors." Both of these units are basically variable jet-size carburetors wherein a tapered needle slides in and out of a jet hole, valving or metering fuel according to demand. S. U. accomplishes this with a butterfly valve that controls the airflow and creates the vacuum that pulls up the needle. Amal combines butterfly valve and needle control by moving manually a sliding air valve to which the needle is attached. Both of these systems are what might be called gravity-fed port injectors. If the float bowls were substituted by a fuel pressure system and the needle metering moved outside the air port, the result would be similar to the Hilborn constant-flow port injector used on Indianapolis cars.

Other bolt-on fuel injection options that we hear so much about are really port injectors, timed by engine vacuum or electronically, and bear a striking resemblance to a floatless aircraft carburetor. In case you were ever curious as to why an aircraft engine could run upside down this is the answer!

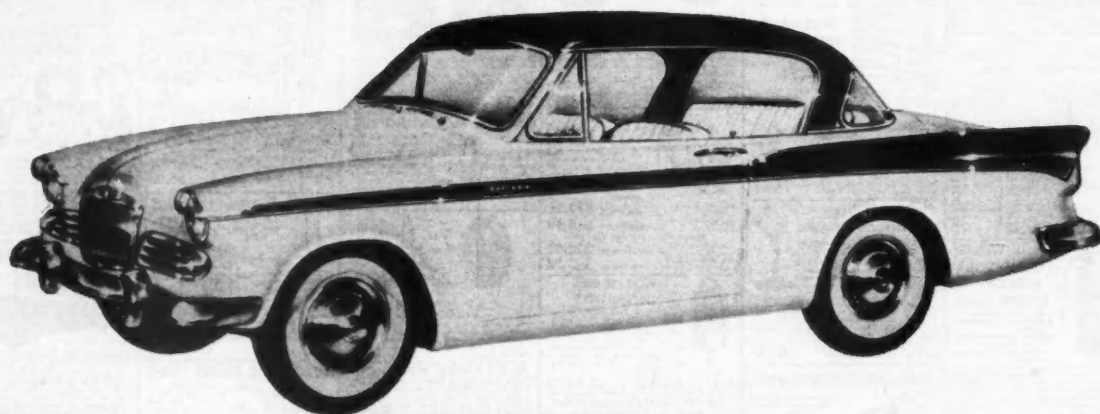
Timed injection of fuel into the combustion chamber, with a method of varying the amount according to speed desired, is true fuel injection. Atomizing of fuel is done by pressure and a nozzle, rather than by intake air picking it up from a jet hole. Diesel engines have good true injectors and the Bosch system used on the Mercedes 300-SL is a gasoline version of a diesel unit. Anyone desirous of experimenting with port injection could well start with either the Amal or S. U. carburetor.



HILLMAN

Experts rate the **HILLMAN** best!

POPULAR SCIENCE: "In the opinion of the writer, the Hillman—at the price—probably is the best buy among the more popular foreign cars selling under \$2000." **MOTOR TREND:** "Excellent choice as a small car for the one-car family. More power, sturdier engine... cruises easily at highway speeds. Even six-footers can find leg room to ride comfortably. Service and parts readily available." Five models—4-door sedans, convertible, 2- and 4-door station wagons—from \$1639 p.o.e. Western states, slightly higher.



SUNBEAM

Rally Champion

MOTOR TREND predicted: "The Rapier is an excellent road machine, and with its big-hearted engine, floor shift, improved steering and rugged brakes, it will have European rallyists talking to themselves!" And here are Sunbeam's latest achievements:

Winner of R.A.C. British International Rally! 1st and 2nd in its class in Circuit of Ireland Rally! First British car across the line in Monte Carlo Rally! Manufacturers' Team Championship in International Tulip Rally! 1st, 2nd, 4th and 5th in its class in the 2600-mile Alpine Rally—Europe's toughest! Sunbeam Coupe de Sport, \$2499 p.o.e.; 3-position convertible, \$2649 p.o.e. Western states, slightly higher.

Test-drive both of these performance champions at your Hillman/Sunbeam dealer's!



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YOUR GUIDE TO *ALL DOMESTIC*
AND IMPORTED CARS

MT's
WORLD
SHOW
ISSUE

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SPORTSCARS . . . 38

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LUXURY CARS . . 50

ECONOMY CARS . 54

GRAN TURISMOS 64

FAMILY CARS



a price and size for everyone

FAMILY CARS is not a term we arrived at by chance. We needed something to describe those cars that are not the exciting sportscars, the dashing Gran Turismos, the lush \$10,000 luxury jobs, the diverse economy cars, the new breed of compact cars.

The kind of cars we are describing in this section are the "ordinary" cars; the cars within reach of the normal householder; the cars suitable to the needs of the average family regardless of size; the convertibles, the sedans, the wagons, the hardtops; the cars that do not set you apart from your neigh-

bors, but make you one of them; the cars bought by 90 per cent of new car buyers.

To make our brief reports on these cars of more value to you, we felt we should review what's new about them (see page 75 for a further technical discussion of the new engineering features), compare them to last year's models in performance, ride, and fuel economy, and give you a frame of reference in regard to cost of servicing and depreciation.

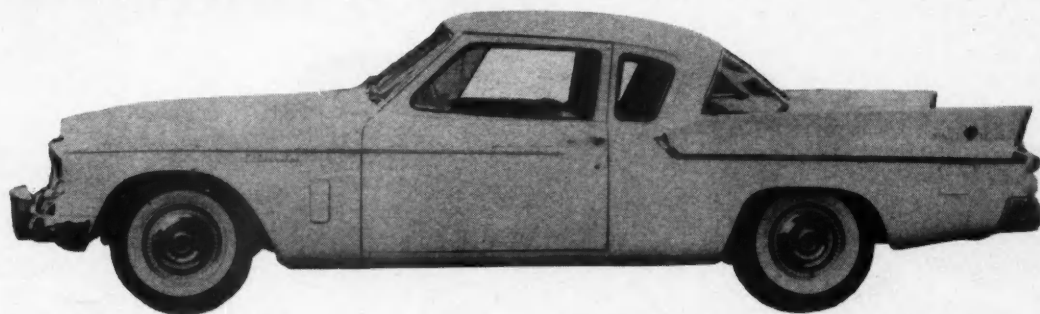
We hope we've given you enough for your family to open the debate on "Which one to buy?"

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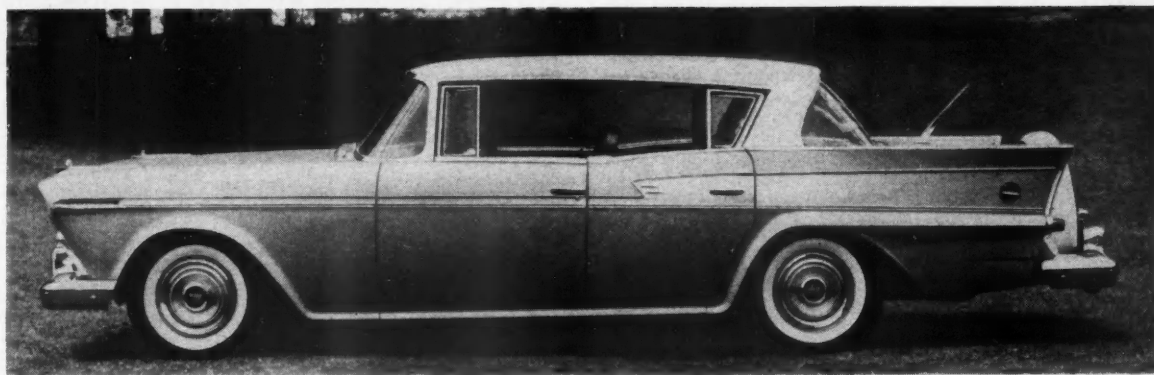
Studebaker Hawk



STUDEBAKER'S SILVER HAWK for '59 retains basic lines with modifications and refinements of parking-directional lights, rear fender styling. Fully reclining front seats are available (optional) Under hood, buyer has choice of two new engines (six or V8) Only one model (5-passenger sedan) is offered on a 120.5-inch wheelbase Price—Six, \$2360, V8, \$2495 Handling, ease of parking are about standard; ride is smooth, soft. Suspension modifications increase stability, reduce body roll on curves Some decrease in car weight should mean bit livelier performance, more economy. L-head six is smaller, more efficient than last year's

engine; gas mileage will be up about 8-10 per cent at normal cruising speeds. V8 will also show some improvement. Both tuned to run on regular grade gasoline Performance brisker on both small six, V8; more urge available through use of 4-barrel carburetors, dual exhausts (optional) on V8 Cost of servicing will depend on amount of power gadgets buyer finds appealing. Major tune-up will run about \$13 for six, \$15.50 for V8, plus parts Depreciation of the popular Studebaker over past three years averages about \$450 per year.

Ambassador



1959 AMBASSADORS have not changed markedly since last year New features include separately adjustable reclining seats, a front seat headrest, and self-adjusting brakes (optional) '59 series features six models, all 4-doors, including Super sedan and wagon, Custom sedan and hardtop, and Custom wagon and Custom hardtop wagon. All are on 117-inch wheelbases Cars are powered by 270-hp V8 engine with four-barrel carburetor. Intake and exhaust valves are redesigned for quieter operation. Single exhaust is standard on all models, but dual system is available as optional extra Price range of cheapest to most expensive Ambassador is \$2580 to \$3100 Though a bit narrower than average, there's comfortable seating for six in all models

Steering is light and easy and the car's compactness makes it somewhat easier to maneuver in heavy traffic. During highway cruising the ride is comfortable and virtually soundless with windows closed. Tests indicate a 13-mpg average for city driving and a jump to about 17 mpg at steady 50 mph Performance is adequate for all situations; 0-60 mph run can be turned in about 14 seconds Cost of servicing will vary from area to area, but should be roughly comparable to that for tuning up the Rambler Rebel (about \$12) Since the car is comparatively new on the market, no long-range depreciation average can be determined and the one-year figure (\$509) is not indicative.

Buick



BUICK'S NEW FEATURES include: new 401-cu.-in. V8 of 325 hp; coil spring suspension at all wheels, with air optional at rear only; more rigid K-type frame with boxed siderails; improved aluminum, finned brake drums; completely new bodies with two different roof-lines For '59 Buick offers three series (Le Sabre, Invicta, Electra) on two wheelbases (123 and 126 ins.). Le Sabre has 2- and 4-door sedans and hardtops, a 2-door convertible, a 4-door wagon. Invicta offers same models, except no 2-door sedan. Electra has 4-door sedan and hardtop, 2-door hardtop, plus a 4-door sedan and hardtop and 2-door convertible with an extra long deck Price range of cheapest to most expensive Buick is \$2740 to \$4300 There's comfortable seating for six in all hardtops and sedans (up to eight in wagons), though middle front passenger has high hump to straddle Buick is easy to drive because of responsive steering, simple to park because of exceptional vision, easy to correct on open road, better handling than in '58 Ride is comfortable, quiet, and bit on soft side New options of triple-turbine Dynaflow, dual exhausts, and higher rear axle ratios promise better economy than last year Acceleration is slightly less than last year because of desire to gain fuel economy. Will average around 10 seconds to 60 mph Cost of servicing will depend on number of power gadgets you like. Major tune-up will run about \$12, plus parts Depreciation of the most popular Buick over past three years averages about \$525 per year.

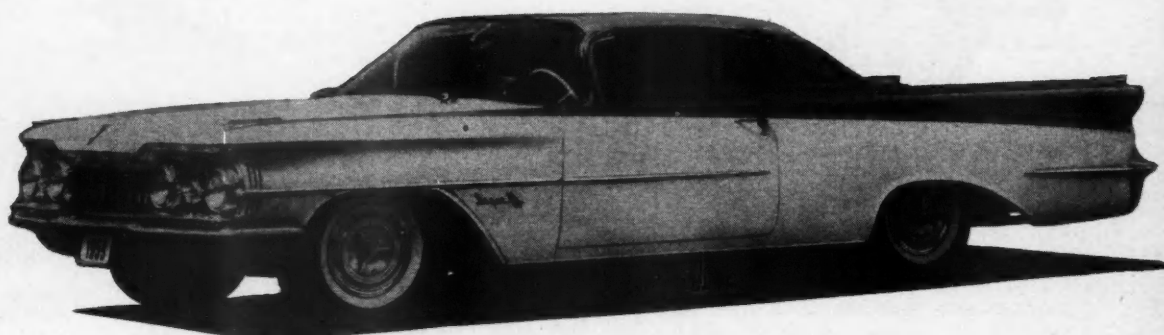
NEW PONTIAC FEATURES for '59 include larger (389-cu.-in.) basic engine—optionals let you select performance or economy—a wider track that gives greater stability and improved handling, bigger and cooler-running brakes, and new line of leaner-looking bodies Series designations include Catalina, Star Chief and Bonneville on two wheelbases (122 and 124 ins.) with optional engines rated at from 215 to 345 horsepower. Catalina has 2- and 4-door sedan, convertible, 2- and 4-door hardtop and station wagon. Star Chief offers 2-door sports sedan, 4-door sedan and hardtop. Bonneville has 2-door hardtop, 2- and 4-door hardtop, convertible and wagon Price range is from \$2630 to \$3530 Comfortable seating capacity runs from five (with buckets) to six (without) and eight in station wagons Pontiac's new rotary valve power steering makes it easy to steer and park. Exceptionally wide tread front and rear provides very good stability in turns, soft riding qualities on straights Top performance available from 345-hp Tempest 420-A should make Pontiac one of fastest (if not the fastest) on the dragstrip. Should take less than eight seconds from 0-60 mph Economy-minded can settle for less power, more mileage (from 14-18 mpg). Special de-tuned, optional engine should give even more on regular gas Servicing will vary according to equipment, but major tune-up will run about \$17, plus parts Depreciation of most popular Pontiac over past three years averages about \$465 per year.



Pontiac

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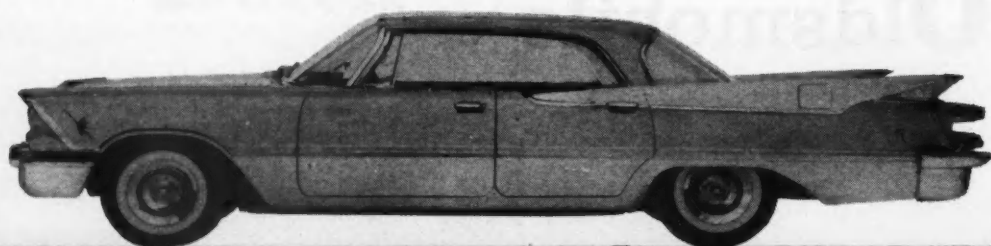
OLDSMOBILE'S 1959 LINE features two new body types added to each series, a completely new body, and increased interior room Mechanically, new cam gives crisper response, effective braking area is increased, with better cooling method and improved hydraulic cylinders Three series (Dynamic 88, Super 88 and 98) on two wheelbases (123 and 126.3 ins.) come with two engine sizes, 371 cu. in. (88s) and 394 cu. in. (98s) Dynamic 88 has 2-door sedan, 2-door hardtop, 4-door hardtop convertible, 4-door sedan, station wagon. Super 88 offers 2-door hardtop, 4-door hardtop, 4-door sedan, convertible and station wagon. 98 has 2-door hardtop, 4-door hardtop, 4-door sedan, convertible

. . . . Price range from cheapest to most expensive Olds is \$2830 to \$4360 All sedans and hardtops will handle six people, station wagon eight New rotary power steering unit—with self-adjusting feature—makes handling a breeze and gives driver feel of the road when on the highway Ride is comfortable and a bit soft Attempts to increase acceleration (0-60 mph in from 8.5 to 10 seconds) means engines will probably burn more fuel, but will do it more efficiently. A light foot should give about same gas mileage as the '58s (12-16 mpg) Cost of servicing will vary slightly, but major tune-up will run about \$15 for labor Depreciation of the most popular Oldsmobile over past three years averages about \$460 per year.



Cadillac

NEW FOR CADILLAC are 390-cu.-in. V8 engine (available in 325-hp, 345-hp versions), re-designed shock absorbers, improved power steering system, several styling changes Offered are 14 models (nearly every possible body style except wagon) in four series (Sixty-Two, Eldorado, Sixty Special, Seventy-Five). Hydra-Matic, power steering, power brakes standard on all Price range from cheapest to most expensive is \$4890 to \$13,074 Comfortable seating for six in all sedans and hardtops, eight in special sedan New improvements result in better steering, front-wheel control, ride characteristics Despite larger engine, gas consumption will be about the same as for '58 (11-12 mpg under all conditions) More horsepower, torque at low speed should improve performance slightly (0-60 mph in about 12 seconds) Major tune-up about \$17-20, plus parts. Depreciation of most popular model over past three years averages about \$600 per year.



Dodge

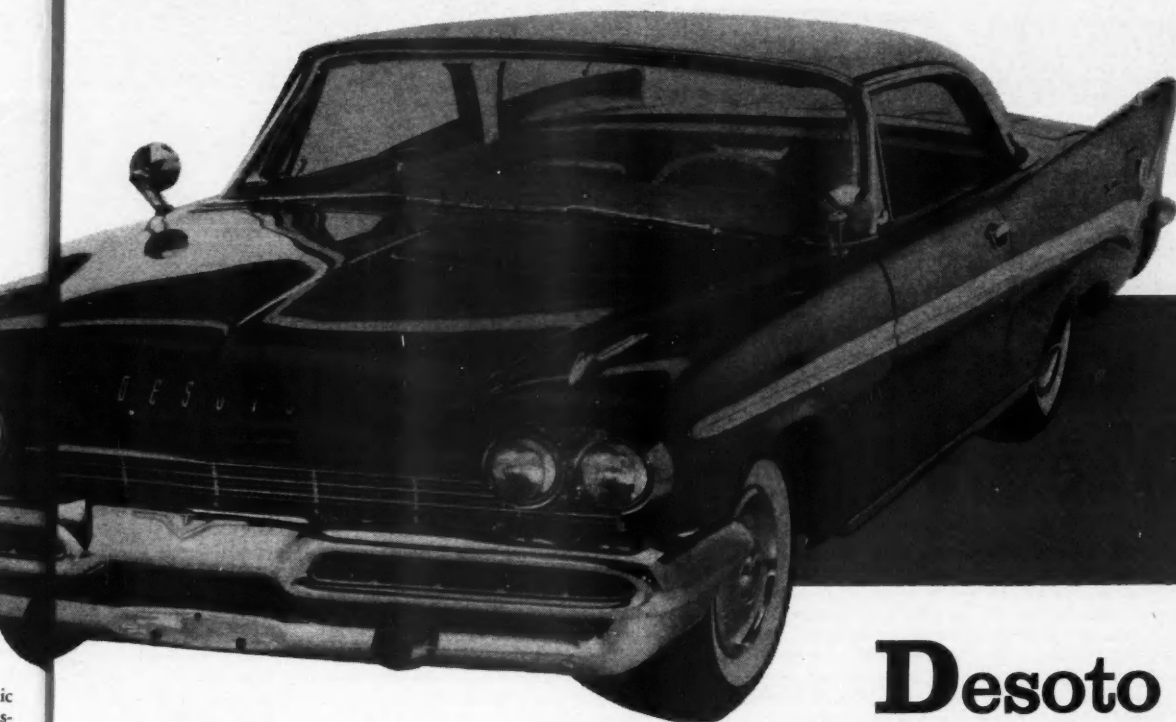
DODGE'S NEW FEATURES include: new oval steering wheel for better visibility and more legroom, a colored bar speedometer, improved torsion bar front suspension, cam-adjusting front wheel alignment and a host of optional items—swivel seats, rear suspension air assist bags, self-tilting rear view mirror and pushbutton heater-air conditioning system For '59 Coronet series offers 2- and 4-door sedan, 2- and 4-door hardtop, convertible. Royal has 4-door sedan, 4-door hardtop, 2-door hardtop. Custom Royal has same plus convertible. Sierra models include 4-door wagons with six- or nine-passenger option. On 122-inch wheelbases Coronet uses a six (230 cu. in.) while Coronet V8 utilizes popular Red Ram (236 cu. in.). 361-cu.-in. plant is available for Royal and Sierra series with modified version optional for Custom Royal, Custom Sierra and convertibles. 383-cu.-in. D-500 optional on all models Price range of cheapest to most expensive model is \$2500 to \$3430 Seating capacity is standard and folding armrest between the swivel seats can be converted into a seat for extra front passenger Comfort and quietness of ride is much the same as in '58 Higher hp ratings should boost performance of all engines except six-cylinder, where economy is keynote D-500 should clip along to 60 mph in near-nine seconds. Fuel economy of V8s should be in 11-15 mpg range Cost of servicing will vary according to engine, but major tune-up will run about \$12, plus parts Depreciation of most popular Dodge over past three years averages about \$525 per year.

THIS YEAR'S CHRYSLER CARS feature a new line of larger, V8 engines. Design changes include revamped front and rear, trim, roof styling. Among new optionals are swivel seats, electronic rear view mirror, automatic headlight dimmer, leveling air suspension unit Windsor and New Yorker offer 4-door sedan, 2- and 4-door hardtop, convertible, 4-door wagon (2 or 3 seats). Saratoga has 4-door sedan, 2- and 4-door hardtop. 300-E has 2-door hardtop, convertible. Smallest of new engines (383 cu. in., 305 hp) is in Windsor. Saratoga powered by 325-hp powerplant. New Yorker has 350 hp, 300-E 380 hp. Torqueflite, power steering, power brakes standard on Saratoga, New Yorker, 300-E Price range from \$3200 to \$5740 Cars will seat six comfortably (up to nine in wagons). Occasional seat between swivel seats (standard on 300-E) may prove bit small for average person Ride, handling in Chrysler tradition Lighter engine (up to 101 lbs.), increased efficiency should offset larger hp rating, economy remains same as '58. Acceleration increased somewhat in lower and middle speed ranges Major tune-up about \$12-15 plus parts. Depreciation averages about \$625 per year.

Chrysler



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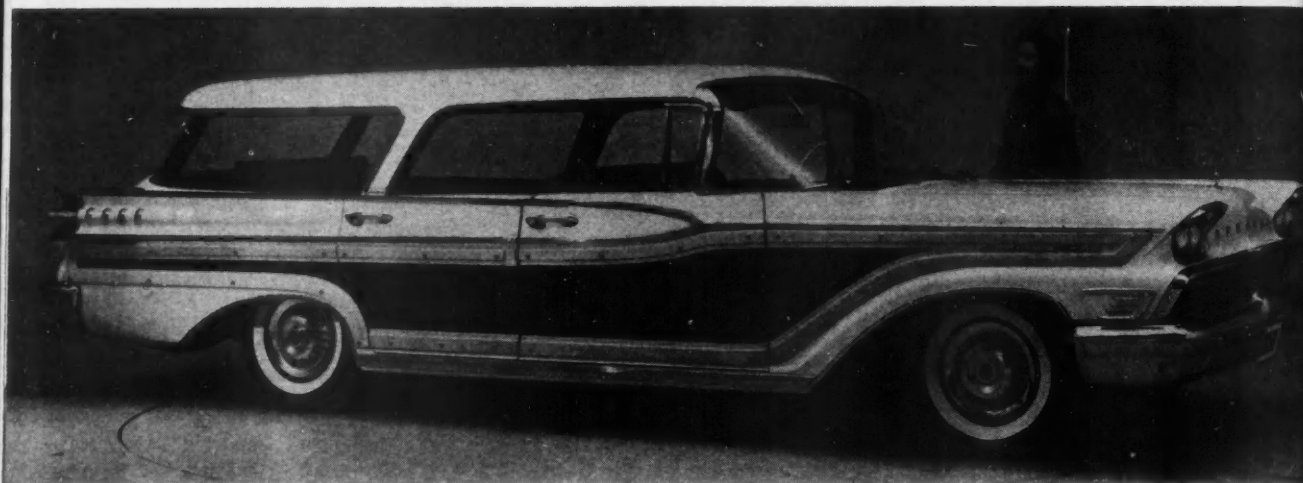


Desoto

1959 PLYMOUTH STYLING produces no major changes except use of anodized aluminum grille, larger fins, massive bumper, increased glass area Optional extras include rear air leveling, swivel seats, side mirrors adjustable from inside, self-tilting rear view mirror and the Sport Fury decklid with dummy wheel cover The Savoy has a 2-door and 4-door sedan. Belvedere offers a 2-door sedan, hardtop, 4-door sedan and convertible. Fury has 2-door hardtop, 4-door sedan and hardtop. Sport Fury has 2-door convertible and hardtop models. Suburbans include 2- and 4-door wagons 230-hp Fury V-800 engine is standard for Savoy, Belvedere and Fury models. Improved six is available in Savoy, Belvedere and some Suburban models. Sport Fury uses modified V-800 with 260-hp. 305-hp Golden Commando optional for all V8 models Price range runs from \$2140 to \$3130 Hiproom is ample for seating six in sedans, nine in larger Suburbans Modified front suspension has improved an already-good handling car. Ride is about same, as is performance and economy (see page 82) Optional extras affect servicing cost, but major tune-up should run only about \$12 (for V8) plus parts Depreciation over three-year period for most popular model averages about \$340.

DE SOTO FOR '59 retains basic Forward Look under detailed changes. Bumper, grille, headlights and tail lights redesigned. New roofline on 4-door hardtops. Interior changes include oval steering wheel, bar-type speedometer. Swivel seats and pushbutton weather controls are available. Other new optionals are self-adjusting (electric eye) rear view mirror, automatic headlight dimmer, air suspension unit. 13 accessories optional last year are now standard on some models Firesweep, Firedome and Firelite offer 4-door sedan, 2- and 4-door hardtop, convertible. Firesweep and Firelite have 4-door wagons (2 or 3 seat). Adventurer has 2-door hardtop, convertible. Torqueflite is standard on Firelite, Adventurer; power steering and brakes on Adventurer Urge output is 290 hp (Firesweep), 305 hp (Firedome), 325 hp (Firelite), 350 hp (Adventurer). Adventurer engine optional on all models Price range from cheapest to most expensive is \$2900 to \$4740 All models will handle six comfortably (up to nine in wagons) Handling is unchanged, Level-cruise air suspension (optional) with Torsion-aire (standard) will improve ride Slight displacement increase should mean better performance Major tune, about \$14. Depreciation, about \$500 per year.



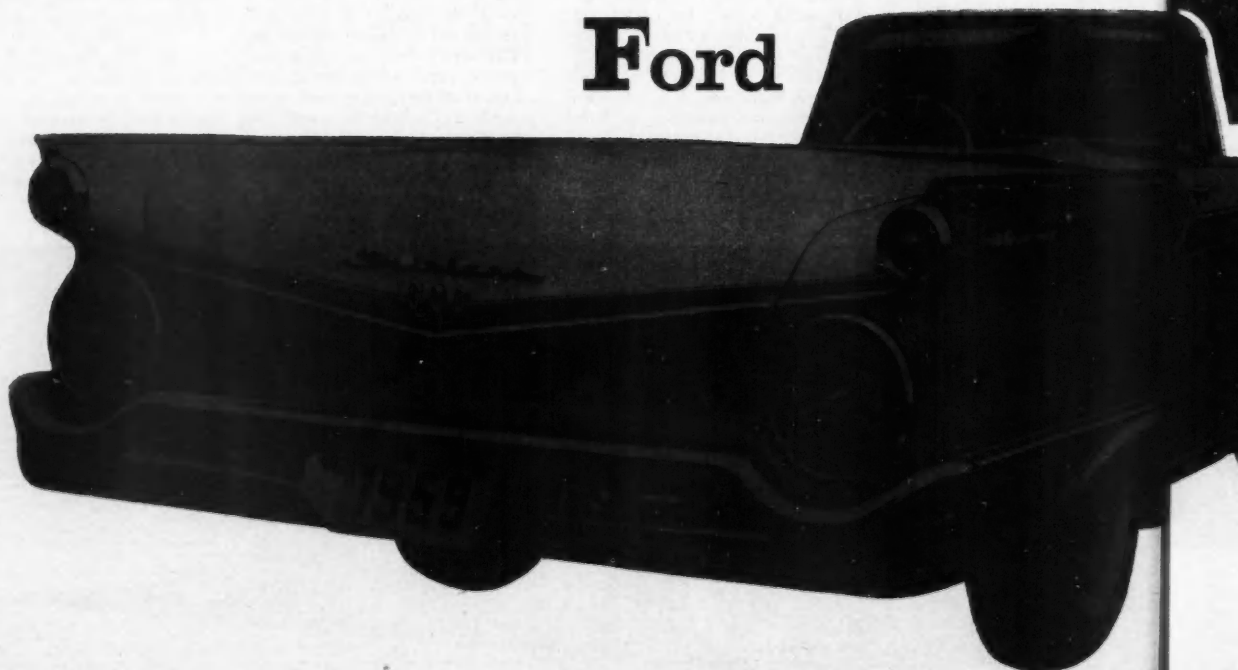


Mercury

MERCURY FOR '59 offers a longer car (2 to 4½ ins., according to model), with a wider frame and tread (1 in. front, 3 ins. rear), a gearshift lever to replace the poorly-positioned pushbuttons, and two different rooflines. Engines are reworked for more efficient and economical operation, but not on regular-grade gas. . . . Park Lane—most expensive series—offers 2-door cruiser (hardtop), 4-door cruiser and convertible. Montclair has 2-door cruiser, 4-door cruiser, 4-door sedan. Monterey has 2-door cruiser, 4-door cruiser, 4-door sedan. Country Cruisers (station wagons) include three 4-door and one 2-door models. Four V8 engines ranging from 235 to 343 hp are available. . . . Price range is from \$2760 to \$4200. . . . Comfortable seating in all hardtops and sedans (up to nine in wagons) with middle front passenger getting better break from 50 per cent lower transmission hump. . . . Handling is every bit as good as last year, brakes are efficient, acceleration is good and the ride smooth. Steering takes less effort. . . . Economy of operation should be somewhat improved. . . . Major tune-up will run about \$17.50. . . . Depreciation of the most popular Mercury over past three years averages about \$450 per year.

FORD FOR '59 looks much like '58 models despite extensive new metal work. Lower, wider and heavier, only trim and tail light changes make exterior different. Frame is wider and heavier and engines are tuned for regular gas in attempt to increase effective mileage without sacrificing performance. . . . Other new features: less complicated two-speed automatic transmission, larger brakes on wagons and retractable hardtops, and a redesigned front suspension aimed at reducing wheel alignment costs. . . . Line includes 17 models in four series. Fairlane 500 offers retractable hardtop, convertible, two pillarless hardtops, two thin-pillar sedans. Fairlane and Custom 300 has 2- and 4-door models. Six station wagon models include 2- and 4-doors. . . . Four engines, including a six, are available. . . . Price range is from \$2130 to \$3340. . . . Extra width means even more ample seating for six in most models, nine in larger wagons. . . . Driving comfort is good and improved all-around visibility makes parking easier. Handling is excellent and driver achieves real feel of the road. . . . New engines should mean more miles for the gas dollar; hottest engines will be in 12-13 mpg range, others may go up to 15 mpg average. . . . Acceleration with the hottest engine should equal last year's good 0-60 mph time of 10 seconds. . . . Major tune-up about \$25-27. . . . Depreciation of most popular Ford over three-year period averages about \$325.

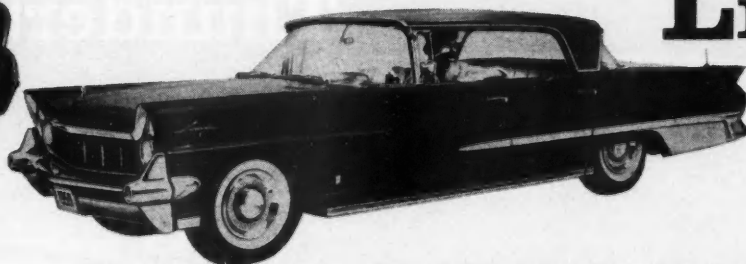
Ford



EDSEL'S RESTYLING will never prevent it from being recognized as an Edsel. Committed to front-end style, designers have modified it into still recognizable front pattern. Oval opening is smaller, merged into horizontal trim. Twin headlights are lower, incorporated into grille. Glass area is larger, windshield extends into roofline. Redesigning has given car lower, wider, less bulky look. . . . Mechanically, a two-speed automatic transmission is offered at lower price because of 25 per cent fewer parts, 50 pounds less weight. In line with company's economy-mindedness, new six-cylinder engine (optional) is available. . . . Models available in three series—Ranger, Corsair, Villager (all on 120-inch wheelbase).

Edsel

Ranger and Corsair have 4-door sedan, 4-door hardtop, 2-door hardtop. Corsair has convertible, Ranger 2-door sedan. Stock Ranger engine is 200-hp V8 (145-hp six optional). Corsair uses 225-hp engine as does Villager wagon (choice of two 4-doors). 300-hp Super Express optional on all models. . . . Price range from cheapest to most expensive Edsel is \$2520 to \$3070. . . . There's comfortable seating for six in all models (up to nine in wagons). . . . Driving comfort is good; ride fairly softly sprung; steering is well balanced. Less bulk, improved visibility make parking easier. . . . Line of engines permits buyer to choose most suitable balance of economy and performance. New six is designed for economy, two of other three are set for regular gasoline in effort to produce more mileage per dollar. . . . Cost of servicing will depend on engine choice. Tops for major tune-up should be about \$21-\$25, plus parts. Since Edsel was first produced in '58, average three-year depreciation cannot be determined. One-year figure of \$925 is not indicative.



Lincoln

LINCOLN'S PREFERENCE for stability of design is apparent again in '59. Style changes are kept to a minimum. Most noticeable are less depth in sculpturing, reworked grille, lighter-looking bumpers. Mechanically, changes are mere refinements. . . . For this year Capri offers 2- and 4-door hardtop, 4-door sedan. Premiere has same. Both are on 131-inch wheelbase, use 375-hp engine. Price range from cheapest to most expensive Lincoln is \$4900 to \$10,230. . . . There's comfortable seating for six in all models. . . . Lincoln is easy to handle and simple to park considering its size. Ride is comfortable, quiet, and a bit on soft side. . . . Engine refinements will make car even quieter, improve efficiency, have little effect on economy of operation. Performance is surprising for such a large car (0-60 in about 10 seconds). . . . Cost of servicing will depend on enthusiasm for power gadgets. Major tune-up will run about \$17.50. . . . Depreciation over past three years averages about \$850 per year.

Chevrolet



CHEVROLET STYLISTS have gone whole hog for 1959, presenting a completely new lower, longer and roomier body to go with improvements in chassis, suspension and engines. New horizontal fins blending into rear deck make for versatile design. Used on all models effectively, it is particularly attractive concept for new El Camino pickup, Chevy's answer to the Ranchero. Mechanical features include improved rear suspension, increased braking area with provisions for cooling and heat dissipation, improvements in optional Turboglide transmission. Engine refinements have been directed toward better economy. . . . This year Chevrolet offers models in four series, all on 119-inch wheelbases. Biscayne and Bel Air offer 2- and 4-door sedans. Impala has 4-door sedan, 4-door hardtop, 2-door hardtop, convertible. Station wagons available with 2 and 4 doors, two and three seats. With camshaft, carburetor, fuel injection and compression ratio options for 283-cu.-in. and 348-

cu.-in. engines, there are eight different V8 choices, plus a six. Top output is 315-hp. . . . Price range from cheapest to most expensive Chevrolet is from \$2160 to \$2900. . . . There's comfortable seating for six in all sedans and hardtops, up to nine in wagons. . . . Driving ease has been improved by relocating front seat and steering wheel for better visibility. 74 per cent increase in rear glass area makes for easier parking and maneuvering in heavy traffic. Suspension improvements have helped handling and reduced body sway; steering is light, if a bit slow. The ride is soft both in town and on the highway. . . . Fuel economy is improved five to 10 per cent in the six, slightly less for V8. Over-all performance should be slightly better than last year. . . . Major tune about \$7.50 for six, \$12 for V8, plus parts. Depreciation of most popular Chevrolet model over past three years averages about \$275 per year.

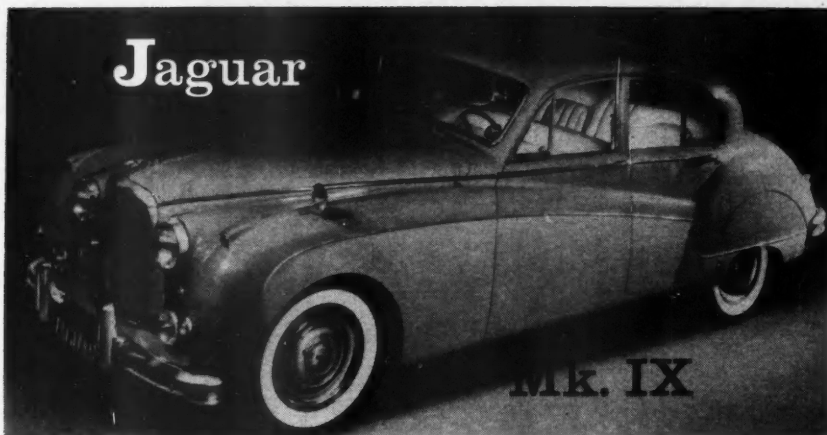
Thunderbird



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Jaguar



Mk. IX

JAGUAR LINE FOR 1959 has added Mk IX sedan as running mate to established Mk VIII. New offspring will appeal to those who prefer familiarity to surprise. Chassis and body are basically same as on Mk VIII. Disc brakes, power steering and larger (225-hp, 230.6-cu.-in.) engine have been added. . . . One model (4-door sedan) offered on 120-inch wheelbase . . . price with automatic transmission (optional) is \$5990 (p.o.e. Los Angeles). There's comfortable seating

for four, six will fit. . . . Steering is improvement on Mk VIII; lock-to-lock reduced from five turns to $3\frac{1}{2}$. Can be further improved by experimenting with tire pressure. Parking may be troublesome at first for those used to larger glass area in U.S. products. Though no sports car, cornering is still good, ride stable and comfortable. Some wind noise apparent at high speeds. . . . New six-cylinder engine will use regular or premium gas. During tests, averaged 20 mpg

(premium), at constant 30 mph, closer to 13 mpg under all conditions. . . . Larger engine increases torque, improves acceleration in medium, lower speed ranges. Will average about 11 seconds to 60 mph. Top speed is about 115 mph . . . Service cost will vary according to section of country, availability of parts. Major tune will run \$25, plus parts. . . . Forerunner (Mk VIII) depreciated about \$975 per year over three-year period. May not apply to newer model.



Citroen

ID-19, DS-19

THE THUNDERBIRD'S SUCCESS in '58 apparently convinced Ford there was no reason for radical changes in a basically sound, fast-selling product. '59 models show only refinements, styling touches. Grille, tail light area, chrome striping have been restyled. Mechanically, suspension system has been redesigned. . . . Two models (2-door hardtop, convertible) are offered. . . . Hardtop costs \$3700, convertible \$3980. . . . There's comfortable seating for four in both styles; console hump containing ash tray, power window controls, radio speaker eliminates possibility of five in emergency. . . . Improved suspension makes for more evenly balanced handling, slightly less lean in corners, better ride. Good all-around visibility, low lines, power steering make parking easy. . . . Though economy not necessarily vital consideration to buyers in compact-luxury area, gas mileage should be same as last year's Thunderbird (around 10-14 mpg). . . . Performance also about same (0-60 in 10 seconds, 80 mph in quarter mile). Top speed is more than driver will ever need. . . . Major tune-up will run about \$27, plus parts. . . . Newness of 4-passenger style prevents accurate average of depreciation (appearance of new car often results in unstable market), but over-all picture looks good. Thunderbird depreciation from last year is about \$225 for hardtop, \$250 for convertible.

BIG NEWS FROM CITROEN this year is addition of ID station wagon to line. ID-19, DS-19 sedans have only minor detail changes. Mechanically, wagon basically same as sedans. Only minor variations. Will handle 1100-lb. load. . . . Sedans both 4-door models, appear identical except for minor trim. . . . All styles have famous self-leveling air suspension. Heater, power brakes, power steering, automatic clutch standard on DS-19. . . . DS-19 sells for \$3295, ID-19 for \$2795 (p.o.e. New York). No p.o.e. price on wagon at presstime. . . . Sedans seat five easily; up to eight in wagon. . . . Handling is nearly effortless (with or without power steering), response is quick (3 turns lock-to-lock), visibility good either parking or driving. Brakes it's got in abundance. Air suspension (beefed up on wagon) makes for smooth ride under any conditions. . . . Average gas mileage about 22-24 mpg, up to 27-28 on open highway. . . . No boulevard dragster (0-60 mph in about 20 seconds), DS-19 cruises well, has top of 85-90 mph. . . . Detuned engine makes performance figures of ID series slightly less. . . . Major tune-up will run about \$25, plus parts on ID, slightly more for DS. . . . Newness of cars makes averaging depreciation tricky. Depreciation of the DS-19 for one year is about \$1000. Is probably not indicative.



SPORTSCARS

for the dollar-conscious

"EVERYMAN'S SPORTSCAR" aptly describes the new Austin-Healey "Sprite" roadster. The rugged little car has a top speed in the 80s and averages better than 35 miles to a gallon of gas.

This small two-seater has a steel unitized body shell, curved one-piece windshield, foam rubber bucket seats, and a four-speed transmission with synchromesh in the top three gears. Suspension is independent in front, with wishbones, coil springs and shocks. Rear suspension is with quarter-elliptic leafs with lever-type shocks and radius arms.

The powerplant is in-line, four-cylinder, ohv, water-cooled, with a three-bearing counterbalanced crankshaft. With 948cc (58-cubic-inch) displacement, the little mill develops 48 bhp at 5000 rpm. It is a tuned version of the BMC "A" series engine, with twin semi-down-draft carburetors, and works at an 8.3 to 1 compression ratio.

One interesting feature of the car is the hood assembly: the hood, front fenders, radiator cowl and headlamps raise in one piece, providing easy access to engine and suspension.

Specifications: wheelbase 80 inches, overall length 137, height 48.8, overall width 53, front tread 45.8, rear 44.8, weight 1390 pounds. Price (port of entry): \$1795.



Austin-Healey Sprite

Berkeley



THE FRONT-WHEEL-DRIVE BERKELEY has had its face lifted for 1959. In addition to a completely new model, the "Foursome," the headlights of all models are now legally faired into the fenders, seating has been improved, and the canvas top hooks over the upper edge (no snaps) of the new curved windshield. The doors are hinged from the inside, and are five inches wider. The new Foursome is exactly like the standard model, except that the wheelbase has been lengthened eight inches, providing space for a full bench rear seat in addition to the two bucket-type front seats.

The Berkeley uses a 492cc (30-cubic-inch) Excelsior air-cooled, three-cylinder, two-stroke engine. Boasting three carburetors, the little engine develops 30 bhp at 5500 rpm. Charged by a Siba Dynastarter, the 12-volt system uses three coils. Top speed is in the 80s. Normal fuel consumption is between 31 and 43 mpg.

Specifications: wheelbase 70 inches, tread 44, overall length 123, overall width 50, ground clearance 5, turning circle 28 feet, weight 672 pounds. Prices (port of entry): two-seater \$1895, Foursome convertible \$1995, Foursome hardtop \$2095.

"MORGANATICS" WILL BE HAPPY TO KNOW that little has been done to change the appearance of the Morgan. It is still the slam-bang, modern high-performance sports-car with the vintage look. The "coal cart" ride, along with the fantastic cornering ability inherent in this tried and proven suspension, is still a feature of the Morgan, along with the latest version of the Triumph TR-3 engine.

Four models are now standard with Morgan: the two-seater tourer, the four-seater tourer, the two-seater drophead coupe, and the two-seater tourer 4/4. The latter is lighter, uses a Ford Anglia engine developing 36 bhp at 4400 rpm, and has a three-speed box. The Ford 100-E engine has long been popular with English hop-up artists, so plenty of speed kits are available, and in stock or modified form, the 100-E is cheap and easy to maintain. Styling changes have been made at the rear by sloping the tail, and recessing the spare. The body sides of the four-seater have been carried out over the rear wheels, providing a four-inch increase of front and rear seat widths.

The other models are available with either

the Vanguard or Triumph TR engines. In the latter form, the Morgan becomes a truly dual-purpose machine, capable of high performance either on the road or in competition. Specifications: wheelbase 96 inches, tread 47,

overall length 144, overall width 56, weight 1876 pounds (1456 for the 4/4). Prices (port of entry): 4/4 with series 11 Ford engine \$2195; larger models are priced between \$2850 and \$2995.



Morgan Plus 4

MG-A



THE BIGGEST NEWS FROM MG for '59 is their double overhead cam competition model, equipped with Dunlop disc brakes on all four wheels. The new engine develops 107

bhp from its 1588cc (97-cubic-inch) capacity.

The standard MG-A is virtually unchanged for '59, and is still one of the best buys in its class. The four-cylinder 1489cc ohv engine

is competition-proven, and will boot the little car to over 100 mph. The MG-A is equally at home in traffic, on the highway, or in competition.

Trunk space in the streamlined little two-seater is not spacious because of spare wheel storage, but is supplemented by several cubic feet of additional space behind the comfortable bucket seats. Instrumentation is complete, and designed for quick checks. The canvas top with its mechanism has been developed to the point where it is simple to operate, and is weatherproof. Roadability, in wet or dry weather, is exceptional. Specifications: wheelbase 94 inches, overall length 156, overall height 50, front tread 47.4, rear 48.8, weight (roadster) 2080 pounds, (coupe) 2100, (Twin Cam) 2200. P.o.e. prices: \$2462, \$2695, and \$3345 respectively.

RUNNING MODIFICATIONS during the model year are the only changes over '58 contemplated for Britain's Triumph TR-3 in 1959. Essentially, this value-packed sportscar is unchanged from its 1958 form. The high-performance two-liter engine, virtually the same as when the car was first imported in 1954, has proven that it can develop its 100 hp reliably and economically. It is equally at home on the race course, open highway or in city traffic. Disc brakes provide a safety factor for panic stops, while an optional overdrive keeps engine speeds down during highway work.

The TR-3 is one of the few sportscars combining excellent handling, speed (110 mph tops) and acceleration (to 60 in 9.5 seconds) with 25-30-mpg economy during normal driving.

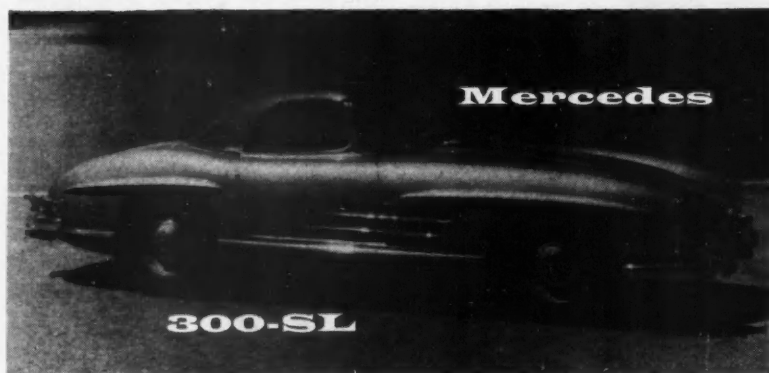
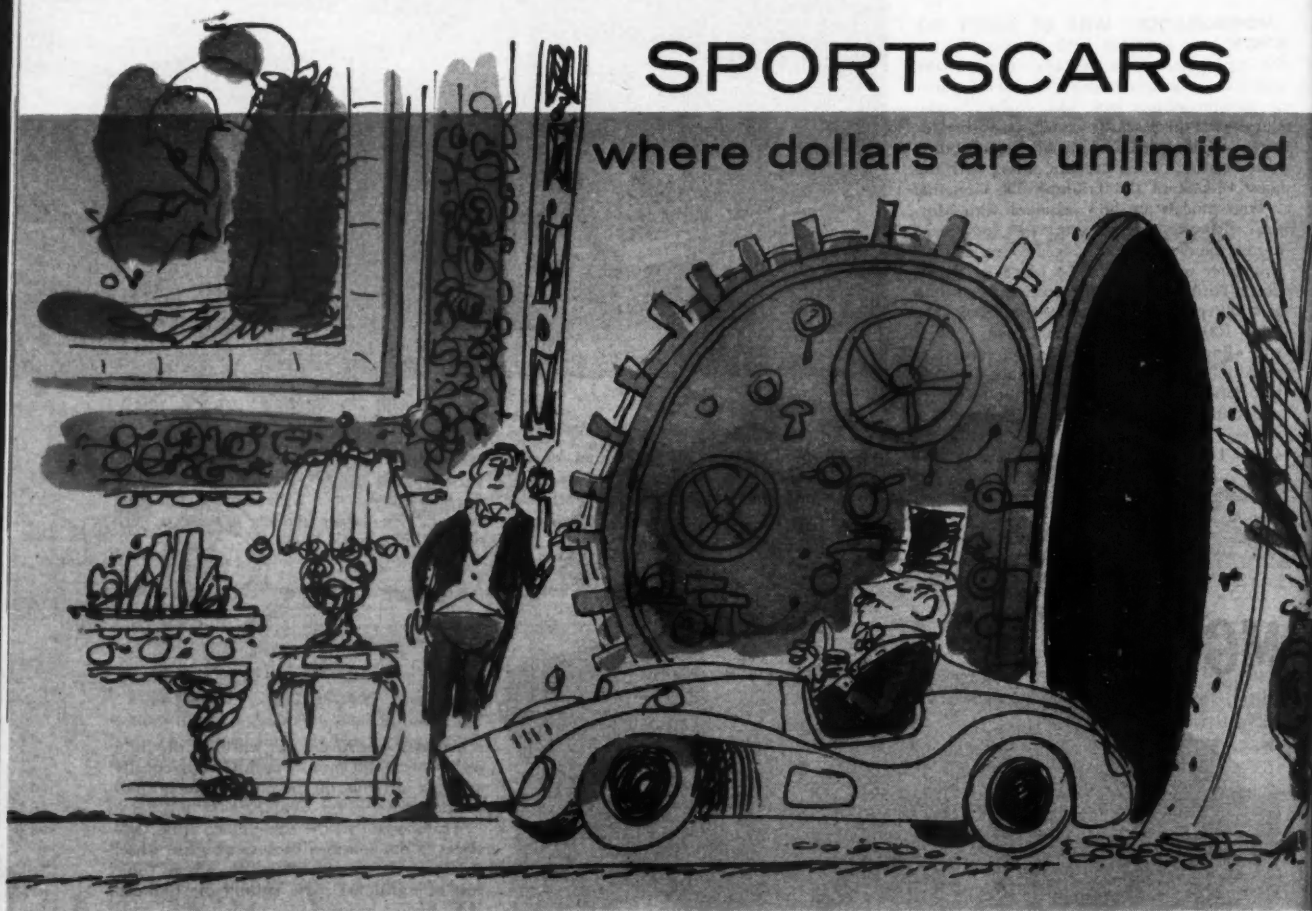
With the optional hardtop, the car becomes a weathertight coupe. Close fitting, sliding-window side curtains are the next best thing to roll-up windows. Seating is for two in comfortable bucket seats; space behind the seats is good for luggage or children if the jump seat is ordered. Specifications: wheelbase 88 inches, overall length 151, overall height 50, overall width 55.5, front tread 45, rear 45.5, clearance 6, weight 2200 pounds. Prices (port of entry): roadster \$2675, hardtop \$2835.

Triumph TR-3



SPORTSCARS

where dollars are unlimited



ADVANCED STYLING AND FRAME CONSTRUCTION, combined with racing roadability and built-in safety features, continue to be the standards of design at Daimler-Benz. New for '59 is a gracefully designed hardtop for the 300-SL roadster, featuring a deep slope-away wrap-around rear window. Now that both SLs have detachable hardtops, the convertibles can be changed into Gran Turismo coupes within minutes. Basically, the two models are unchanged for the new year.

As in the past, the 190-SL is powered by a four-cylinder ohv 1897cc (115-cubic-inch) engine, developing 120 bhp at 5700 rpm. Compression is 8.5 to 1. The four-speed transmission is all-synchromesh. Comfortable seating, along with a fair-sized trunk and ample stowage space behind the seats, makes the 190-SL an excellent touring machine for two. Specifications: wheelbase 94.5 inches, overall length 165, width 68, height 52 (top up), front tread 56, rear 58, weight 2500 pounds. Price (port of entry): \$3998.

The 300-SL is probably the finest production touring machine

currently being made, and with the detachable hardtop, looks almost as distinctive as did the former "gullwing" model. Power is provided by a fuel-injected six-cylinder, single-overhead-cam engine of 2996cc (183-cu.-in.) displacement, with a compression ratio of 9.5 to 1. From stem to stern, and top to bottom, the car is plush and finished to perfection. Both cars now use the famous Mercedes-Benz low pivot swing axle derived from the world-beating 300-SLR racing cars. Zero to 60 mph times are in the neighborhood of seven seconds, with a top speed between 120 and 155 mph, depending upon gear ratios. Specifications: wheelbase 94.5 inches, overall length 177.8, width 70.5, height (hood) 33, front tread 55, rear 57, clearance 5, weight 3075 pounds. Price (port of entry): \$10,970.

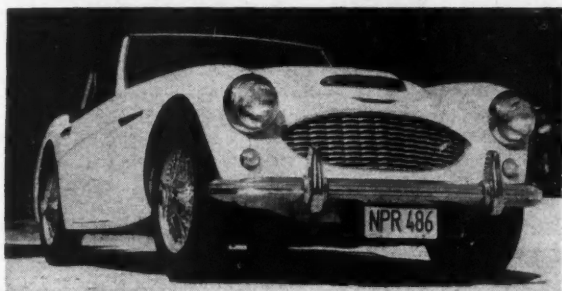


BIG NEWS ITEMS from Austin-Healey for '59 are a horsepower increase to 121.4 (up nearly 20 hp), brakes one-quarter-inch wider with finned drums for greater efficiency, and the addition of a strictly two-seater to the line. Advantages of the two-seater, for those who don't need the children's rear seat, are increased luggage area and a simplified top which offers better weather protection.

Engine in both models is still the reliable 161-cubic-inch BMC "C"-type which develops sufficient torque to accelerate to 60 in under 12 seconds, do the quarter-mile in just over 18 seconds and cruise comfortably at nearly any desired speed. An optional over-drive cuts engine speed to 23.7 mph per 1000 rpm in fourth gear, which means 25 miles per gallon or better for highway cruising.

For fast touring or city commuting for two, either model is an excellent choice. A standard model of either car is available without overdrive, tonneau cover, heater and windshield washers, and with disc wheels for about \$300 less than the deluxe model. Specifications: wheelbase 92 inches, overall length 157.5, width 60.5, height 50, front tread 48.7, rear 50, road clearance 4.5, weight 2450 pounds. Prices (port of entry): deluxe \$3395, standard model \$2995.

Austin-Healey



BMW 507

BOTH TECHNICALLY AND STYLE-WISE, the BMW 507 roadster is one of the most desirable sportscars to come along in recent years.



Few changes have been made since the car was first shown at the Paris show in 1955, and with a 20-car-a-month production rate, there probably will be no major changes for some time.

Designed purely as a road machine, no effort is spared to make the BMW 507 as close to perfection as possible. This meticulous attention to detail is readily apparent in both interior and exterior finish, and in the car's seemingly effortless roadability.

The 3168cc (193-cubic-inch) V8 ohv engine develops 155 bhp at 5000 rpm, on a 7.8 to 1 compression ratio. From a standing start to 60 mph, the 507 clocks slightly less than 9 seconds, and has a top speed in the neighborhood of 125 mph. The light alloy engine, strong tubular frame, and torsion bar suspension, combined with the sensational Goertz styling, add up to the latest in fine automobile manufacturing. Specifications: wheelbase 97.6 inches, overall length 173, width 65, height 50, front tread 56.7, rear 56, weight 2880 pounds. Price (port of entry): \$8988.

YEAR BY YEAR the little Alfa Romeo Giulietta Spider keeps abreast with the horsepower race. This year's model develops 91 bhp in the standard model, and 103 bhp in the Giulietta Super Spider. Except for engine compression and tune, the two models are identical in every way.

The front suspension is independent, with transverse wishbones, variable spring rate, coil springs and telescopic shocks. Rear suspension is by a rigid axle connected to the frame by an upper triangular thrust rod and lower radius rods, coil springs and

telescopic shocks. The overall effect of this system provides excellent roadholding, far in excess of their rated 103 and 118 mph top speeds.

Finish and trim on the Farina-designed bodies are, as in the past, excellent. A tightly-strung cloth folding top and roll-up windows are standard, and a Farina-designed plastic hardtop is optionally available for winter weather or highway cruising. Specifications: wheelbase 87 inches, overall length 152, overall width 61.5, front tread 51, rear 50, weight 1840 pounds. Prices (port of entry): Spider \$3298, Super Spider \$3686.

Alfa Giulietta



Corvette



ONE OF THE TOUGHEST contenders in the two-liter sportscar class is the A.C. Ace, with Bristol powerplant. In the hands of such drivers as Bill Love and Bob Oker, the cars have made an impressive dent in U.S. racing history.

Today's car, based on a 1952 prototype, uses a tubular chassis with transverse leaf springs and wishbones fore and aft, providing four-wheel independent suspension. The standard braking setup is with 11-inch Well-worthy Al-Fin hydraulics with two leading shoes. Optional disc units are available for competition.

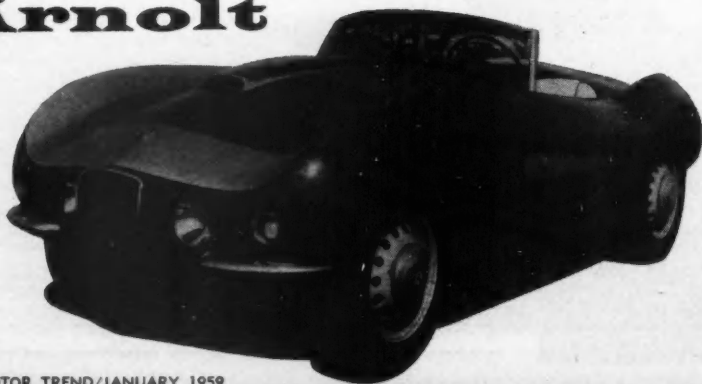
A. C. Ace

Three different engines are offered: the 90-bhp A.C. six, the 105-bhp Bristol 100-B, and the 125-bhp Bristol 100-D2. On the latter unit compression has been raised from 8.5 to 1 to 9.5 to 1, providing an increase of rev limits from 5000 to 6000.

In standard trim, the A.C. Ace and its plush hardtop brother, the A.C. Aceca, rate with the world's finest road machines—both in styling and overall performance. For '59, a detachable hardtop is being offered as an optional extra for the A.C. Ace. Specifications: wheelbase 90 inches, overall length 152, width 59, height 49, tread 50, clearance 6, weight 1720 pounds. Price (port of entry): \$4495.

DESTINED ENTIRELY FOR THE AMERICAN MARKET, the Arnolt-Bristol comes in four versions: the bare competition version; the Bolide, with full weather protection; the De-

Arnolt



CHEVROLET'S SPIRITED, SNUG-BODIED CORVETTE has been given a fresh styling treatment for '59. The bodies have been dechromed and now feature smooth, unornamented hood and deck surfaces, along with redesigned seating.

To achieve better control and traction, radius rods have extended from brackets at the top of the frame sidemembers to the axle housing. Pivotaly mounted, and approximately parallel to the forward portion of the rear springs, the rods leave the springs virtually free of torque influence.

Again for 1959, a wide choice of power trains is available. Five engines, from 230 to 290 horsepower, can be combined with manually operated three- or four-speed transmissions, or the Powerglide. Fuel injection is specified in two of the power packages. The optional four-speed transmission includes a manually controlled reverse gear lockout for '59. Specifications: wheelbase 102 inches, overall length 177.2, height 51.5, width 72.8, front tread 57, rear 59, weight 2975 pounds. Price (standard V8): \$3875.



ON THE ROAD, Lancia has built a reputation hard to beat. Developed amidst the narrow mountainous roads of Italy, these cars cruise effortlessly at high speeds on wide U.S. highways.

In addition to inheriting the Lancia roadability, the Aurelia GT-2500 has been styled for the U.S. market, with chrome trim, ample bumpers, and plush interior trim. Two models are available—the two-seater convertible, and the two-passenger hardtop coupe, with seating for two behind the front seats.

The 2451cc (150-cubic-inch) powerplant is a V6 developing 118 bhp at 5300 rpm. The

four-speed gearbox is synchromesh in the top three gears. Because of obviously better streamlining, the fastback coupe is five miles per hour faster (115 mph) than the convertible. The integral chassis body construction adds ruggedness to the streamlined Italian styling. The coupe has a surprisingly large trunk, which, when supplemented by behind-the-seat storage, provides an amazing amount of luggage space. Specifications: wheelbase 96.5 inches, overall length (convertible) 166.5, (coupe) 172, width 60, height 52.5, front tread 50, rear 51, weight 2576 pounds. Price (port of entry): both models \$5830.

Engineered by James Watt of England's Bristol Aeroplane Co., the dash and instrumentation are centrally grouped, simple, and laid out for easy reading. A truly dual-purpose machine, the Arnolt is equally at home in traffic or in competition. On the road, however, the car comes into its own, cruising effortlessly at high speeds. Seating is excellent, whether in competition or road trim, with full bucket seats supporting the back, shoulders and thighs. The cockpit is large and roomy, with plenty of elbow space.

The six-cylinder engine, based on a BMW formula, has been refined to the point where it is exceptionally reliable, and will drive the Arnolt between 100 and 110 mph. The 1971cc (120-cubic-inch) unit develops 130 bhp at 5500 rpm on a compression ratio of 9 to 1. Specifications: wheelbase 96.2 inches, overall length 167, width 68, height 44, tread 51, weight 2120 pounds. Prices (port of entry): competition model \$3995, Bolide \$4245, Deluxe \$4995, coupe \$5995.

PORSCHE FOR '59 includes an exciting group of cars whose design and performance are difficult to surpass for the money. Although the convertible is not truly the basic Porsche model, we list it here because the coupe is a Gran Turismo machine and is described in that section. The convertible maintains a standard of craftsmanship and finish that should be a goal for other makers to reach. Beautifully upholstered, fully reclining bucket seats hold driver and passenger

Porsche 1600

over long stretches of highway without fatigue. There is an occasional rear seat, better suited for luggage than passengers. The handsomely padded top lowers manually but very smoothly.

Roadholding, braking, cornering, ease of steering, and the utterly smooth all-synchro four-speed gearbox can hardly be improved upon; their suitability for the race course has been amply demonstrated. The air-cooled, four-cylinder opposed engine has progressed through the years and now displaces 1582cc (97 cubic inches), developing 70 hp in the normal version and 88 horses in the Super. With the normal engine it is possible to cruise for long periods at 80 mph



or better. Acceleration to 60 takes about 13 seconds and top speed nudges past the century mark. Fuel economy, dependent upon driving conditions, ranges from 24 to a thrifty 35 mpg.

The new Convertible D, available with either normal or super engine, replaces the popular Speedster. New seats, roll-up windows, a higher windshield and better visibility with top erected are a considerable improvement. Introduced last year and continued is the removable hardtop model on the convertible body shell.

Other specifications: wheelbase 82.8 inches, overall length 155.8, width 65.5, height 51.5, front tread 51.5, rear 50, ground clearance 6.5. Prices (port of entry): standard \$3915, Super \$4365.

WORKING WITHIN THE LIMITATIONS of quality at the lowest practical price range, Jaguar's XK-150 series embodies the latest refinements in performance, roadholding and value. While retaining much of the classic Jaguar styling, the new series features wider grilles, additional width at the cockpit, better streamlining, and one-piece windshields faired into the bodies. Interior styling includes wider applications of soft-tanned leather, and a padded dash cowl.

Paced by the hardtop coupe which seats two persons and has occasional seats in the

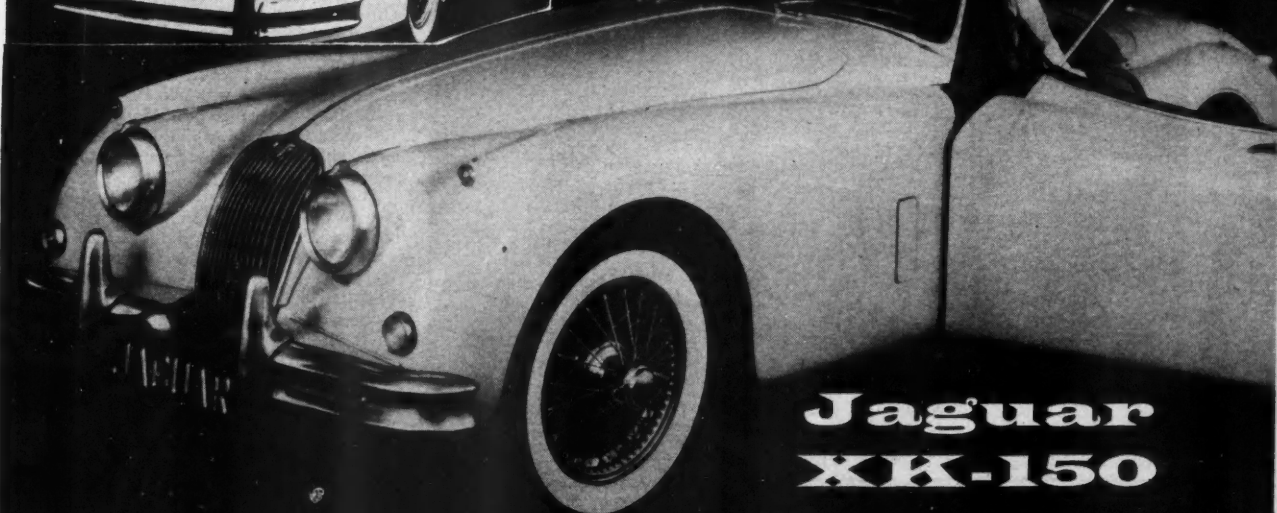
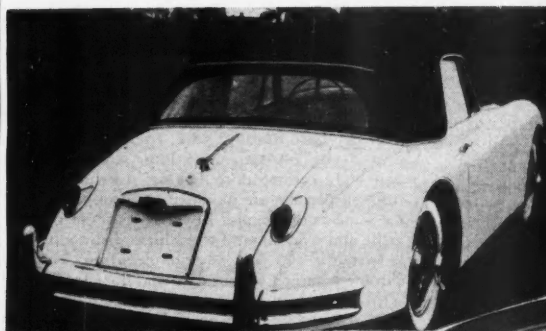
rear for children, the line also includes a convertible, a two-seat roadster, and a dual-purpose XK-150S.

Power for the group is provided by the 3.5-liter six with "B" head and high-lift camshafts, producing 210 hp. Four-wheel disc brakes, roll-up windows, and disappearing convertible top are now standard. The XKs are now available with a choice of transmissions: four-speed manual, manual with overdrive, or Borg Warner automatic. The S model has a four-speed box with overdrive. The S mill uses lead bronze bearings, twin

fuel pumps and beefed-up clutch. Power and torque have been increased through the use of a "straight port" head, 9 to 1 compression and three HD-8 S.U. carburetors. The engine develops 252 bhp at 5500 rpm.

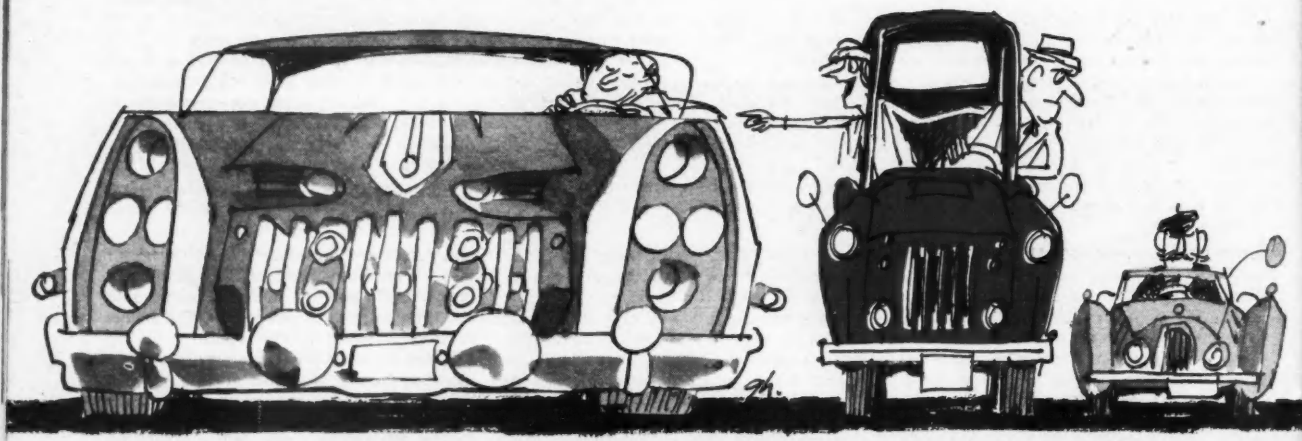
Although in no sense a competition sports machine, the S version does provide "go" for drivers demanding maximum performance. Specifications: wheelbase 102 inches, overall length 176, width 64.5, height 55, front tread 51, rear 51.6, clearance 7.5, weight 3000 pounds. Price (port of entry): roadster \$4495, convertible \$4595.

Roadster and Convertible



Jaguar XK-150

COMPACT CARS



not too big, not too small

ROVER



THE ROVER 3-LITER, all-new addition to the line of fast touring cars from England, is a 5- or 6-passenger 4-door sedan with unit body construction. Engine, steering and front suspension are mounted on a sub-frame, the same as the regular Rover series. Enlarged grille and wrap-around windshield distinguish it from the 105 line. Interior detailing, with chrome-trimmed walnut dash and door ledges, is in the luxury car class.

A 183-cu.-in., 115-hp 6-cylinder, F-head engine makes it a fast tourer with good economy, reliability and easy handling. A manual 4-speed transmission with overdrive or an optional Borg-Warner automatic are available. Test cars have turned in timed speeds of 100 mph, with zero to 60 acceleration under 15 seconds.

The 3-Liter is due for American import early in 1959. Currently imported is the popular Rover 105, basically the same 110.5-in.-wheelbase car as the 3-Liter, but driven by a 160-cu.-in. F-head six developing 108 hp. A 4-speed manual transmission with overdrive is the only one available for the new 105s. Fuel consumption is around 25 mpg and cruising speeds of 70 mph are comfortable. Passenger comfort is good. Handling and parking a car of this size (66-in. width, 62-in. height, 171.5-in. overall length) is easy. As of presstime no price had been set on the 3-Liter, but the 105 sells for \$3675; the 3-Liter will be higher.



RAMBLER AMERICAN

A **TWO-DOOR STATION WAGON** has been added to the American line for 1959, but the body style remains virtually unchanged. Wagon has folding second seat that allows increased luggage space at sacrifice of extra passengers. Instrumentation, controls, engine, unit body and style are all carried over from last year.

Fuel economy is excellent for a car with the comfort and passenger capacity of the American. It will give an honest 20 mpg that can be further improved by the overdrive option for the standard transmission. It cruises well at 70 mph and handles and parks easily. Acceleration to 60 mph in just over 19 seconds is provided by a 195.6-cu.-in. L-head engine that develops 90 hp with single carburetor. Optional automatic transmission and overdrive for the standard 3-speed manual gearbox are available. Front suspension is by coil springs, and leaf springs support the solid rear axle.

Three average-size persons can ride in the front seat, but driver comfort is slightly impaired. Rear seat capacity of three is snug if passengers are over average size. Station wagon has same seating capacity as sedan with folding second seat in position, but with seat folded for cargo carrying, it is comfortable for two passengers, snug for three.

Wheelbase of 100 in. and overall length of 178 in. provide good maneuverability and minimum parking space. Prices are from \$1835 to \$2145, f.o.b. Kenosha, Wis.

THE 1959 RAMBLER SERIES has 11 model combinations, all with four doors. Styling and mechanical changes include new bumpers, new grille, longer fins, larger brakes, enlarged and improved interiors. Overall dimensions have not been increased. Five-foot seat widths are aimed at big-car comfort on a 108-inch wheelbase. Reclining seats and adjustable headrests for the front passenger relieve the strain of long trips; the headrests, however, seem useless unless the seatback is in the fully reclined position.

Unit bodies are dipped in rust-preventing primer before painting, sealing all joints and seams. Dash-mounted pushbutton control for the automatic transmission is a little awkward on the left side of the steering wheel. Optional self-adjusting brakes are increased in area; rear wheels have double-acting hydraulic cylinders.

Rambler six engine is 195.6-cu.-in. ohv and develops 127 hp, and the 250-cu.-in. V8 develops 215 hp. Both are designed for economy and run well on regular grades of fuel.



REBEL

Three-speed manual transmission with overdrive, pushbutton automatic transmission, 2-barrel carburetor for the six, dual exhaust for the V8, limited-slip differential, and full-flow oil filter are among the options offered.

Four-door sedan, hardtop and station wagon—all under 58 in. high and 73 in. wide—are suspended on coils all around with an airbag option for the rear. Prices range from \$2098 to \$2807, depending on body style and number of options.

PEUGEOT



THE PEUGEOT 403, a relative newcomer to the U.S. from France, is rapidly increasing its circle of friends. This spacious sedan, which will carry six when the need arises, stresses function. An example is the use of stainless steel for most of the bright-work. Fully reclining seats make into a bed and a large trunk area encourages tourists who enjoy living on the road. A steel sliding sunroof is an added bonus.

Performance from the 1½-liter, 58-hp, four-cylinder engine is surprisingly good. Acceleration to 60 mph takes only about 20 seconds, and an honest 70-75 mph cruising is possible, due partly to the overdrive fourth gear. Top speed is just over 80 mph. Extremely easy handling and a 30-foot turning circle are wonderful for traffic where it can maneuver more quickly than most compact cars. On Michelin-X tires, the Peugeot seems to be at its best under adverse road conditions. Even in rough country, riding comfort remains quite good.

Fuel consumption, ranging from 20 to 28 mpg, speaks for itself. At \$2175, p.o.e., the Peugeot is an outstanding bargain. Specifications: wheelbase 105 inches, overall length 177.5, width 65.5, height 59.2, curb weight 2352 pounds.

SIMCA VEDETTE



INTRODUCED IN FRANCE IN MID-1958 and featuring new body, interiors, and a Rushmatic transmission option, Simca's Beaulieu and Chambord 4-door, 5-6-passenger V8 sedans are scheduled for import early in 1959. Unitized bodies and independent front suspension, spring-loaded with hydraulic shocks combined with the steering spindles like Ford's Consul, Zodiac and Taunus, form a solid, well-handling, 2744-pound car. Rear suspension is by semi-elliptic leaf springs. A rather generous rear overhang provides large luggage space and comfortable accommodations for five passengers, six when necessary. Wheelbase is 107¼ in., and the body is 69¾ in. wide, 59 in. high, and 187 in. long.

A flathead V8, displacing 144 cu. in. and producing 84 hp, drives through a 3-speed column-shift gearbox. A semi-automatic Laycock-de Normandy overdrive unit, known as Rushmatic, is optionally available, along with a low-ratio rear end. Fuel consumption of 24 mpg at steady 50 mph should improve with the overdrive option, and cruising speeds between 70 and 80 mph provide a quiet, comfortable ride. Zero to 60 acceleration time of 19.5 seconds is about right for a car of this weight, engine size, and purpose.

Trim, specifications, wrap-around windshields and rear windows, fins ending in tail and stop lights, and interiors are basically the same for the Beaulieu and the Chambord, the latter being a sport deluxe model featuring bolt-on wire wheels, semi-custom two-tone paint, radio, heater and overdrive—or, in American terms, a "loaded model." No p.o.e. prices available.

MG MAGNETTE



THE MG MAGNETTE, unchanged for '59, has consistently maintained a high standard of quality English workmanship and luxury finish that is difficult to match for the price. The 68-hp engine is now only four hp below the MG-A and is virtually the same powerplant. Even with a curb weight of 2430 pounds, acceleration to 60 mph takes only 20 seconds; top speed is a smooth 85. Comfortably highway cruising at 70 is possible for hours at a time.

Bucket seats in front and a bench in the rear give good support and will accommodate four with room to spare. Upholstery is high-grade leather which richly complements the natural wood dash and window sills. Luggage space is ample for most touring needs.

Although brakes require rather high pedal pressure, they are not prone to fade and do inspire confidence. So, too, does the rack-and-pinion steering which gives the driver very accurate control. There is little roll while cornering, and suspension, while firm, keeps passengers well protected from sudden road shocks and pitching.

Overall fuel consumption in excess of 25 mpg can be expected, making the Magnette an economical car. East Coast p.o.e. price is \$2740. Specifications: wheelbase 102 inches, length 169.5, width 60.2, height 58.5.

MERCEDES-BENZ, a name synonymous with German engineering perfection, has increased the horsepower of their 220-S sedan to 120 and now offers an optional 130-hp fuel injection engine for the car. The 220's lines may seem austere to motorists accustomed to the flash of Detroit but the car bears evidence of being designed by men who are steeped in practicality and intend that a motorcar should last many years. Interiors are on the plain side but seating has been shaped to fit the passengers (four or five) so that long trips may be made in comfort.

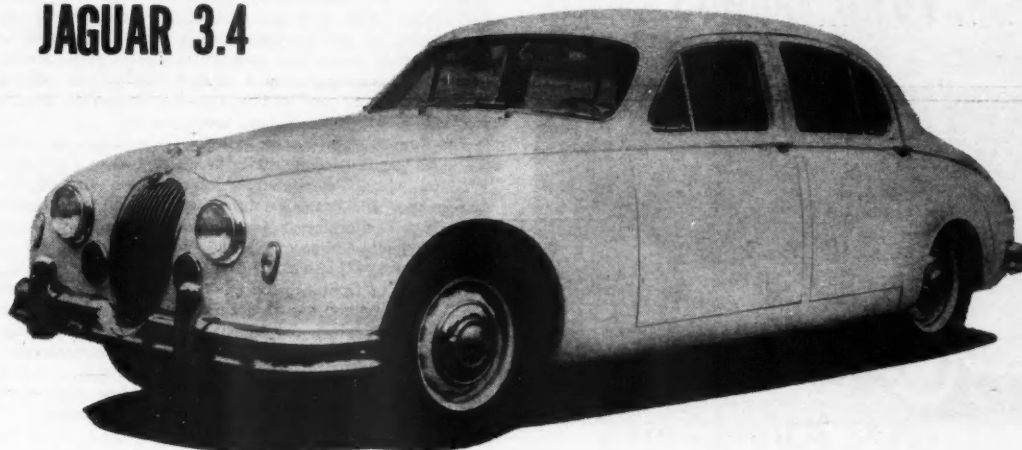
Handling and cornering are everything that a race-bred car should offer, thanks largely to a low-pivot swing rear axle which keeps steering agreeably neutral. Braking, with vacuum assist, is light and fade-free.

While the all-synchromesh four-speed column shift gearbox is delightfully smooth, a Hydrak fluid coupling is optional. It allows clutchless shifting and is quite useful for heavy traffic. Acceleration time to 60 is about 15 seconds, and the overhead cam engine has no objection to being run all day at 6000 rpm, making 100 mph cruising entirely possible. Fuel consumption is quite good—about 25 mpg overall. Specifications: wheelbase 111.2 inches, length 187.5, width 68.5, height 61.5. Price (New York p.o.e.): \$4283.



MERCEDES 220-S

JAGUAR 3.4



FROM COVENTRY, the "Detroit" of England, comes the Jaguar 3.4, a 5-passenger 4-door sedan with a sportscar engine and transmission. The 210-cu.-in. 6-cylinder double-overhead-cam engine, developing 210 hp, is a smaller version of the famous XK sportscar powerplant. A unitized body takes advantage of every available inch of space, so that five adults are comfortable within the overall body dimensions: 180 $\frac{1}{4}$ in. long, 66 $\frac{3}{4}$ in. wide and 57 $\frac{1}{2}$ in. high. Good weight distri-

bution and fast steering (3 $\frac{1}{2}$ turns lock-to-lock) make the 107 $\frac{3}{4}$ -in.-wheelbase Jag a joy to drive in traffic or on the highway. Interior luxury, such as natural wood dash and leather over foam rubber seats that has characterized the larger Jaguar sedans, is retained in the 3.4. The interior is also influenced by an optional automatic transmission for, when so equipped, the individual bucket seats are replaced with a bench seat.

Reasonable cruising speed is hard to deter-

mine for a 100-mph-plus car, but it can get to 60 mph from a standstill in 10.7 seconds. Fuel consumption is in the 15-to-18-mpg range for highway cruising. It gains slightly with overdrive, drops with automatics.

P.o.e. prices are \$4543 with overdrive and disc brakes, \$4643 with automatic transmission and disc brakes. The body style and chassis of the 3.4 first made its appearance with a smaller, 149-cu.-in., 112-hp engine model known as the 2.4—still available.

FORD CONSUL

THE ZODIAC, a high-style version of the Ford Zephyr, will replace the Zephyr on England's export list for 1959. Minor grille and rear-end trim distinguish it from the Zephyr, but underneath it has the same 6-cylinder ohv 90-hp engine, tuned for premium fuel. The Consul with a 4-cylinder version of the same engine, producing 61 hp and with similar fuel requirements, will remain unchanged.

They provide big-car comfort for five or six passengers on rather short wheelbases (105 $\frac{1}{2}$ in. for the Consul, 107 $\frac{1}{2}$ for the Zodiac). Both cars feature a standard Ford 3-speed manual transmission with synchromesh 2nd and high; Zodiac has an optional overdrive unit for this gearbox, or a fully automatic 3-speed transmission.

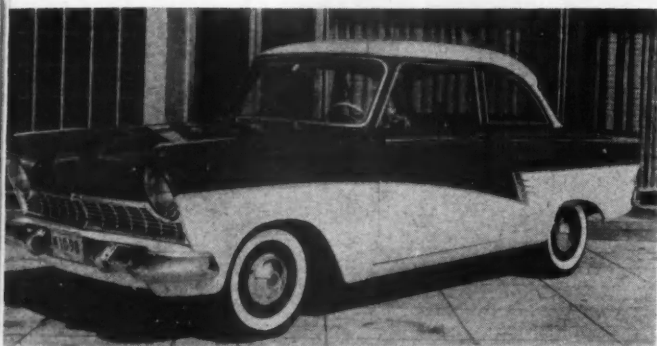
These cars cruise well in the 65-mph range, the Consul getting slightly better than 30 mpg and the larger-engined Zodiac 27 mpg, jumping to 32 in overdrive. The larger 156-cu.-in. Zodiac engine gets the car to 60 mph in around 16 seconds, while it takes 25 seconds for the 108.5-cu.-in. Consul engine to reach 60. Both cars are nearly the same curb weight with the Zodiac's 2688 pounds only about 40 pounds heavier than the Consul.

Slightly longer wheelbase and overall length of 178.5 in., as compared to the Consul's 172 in., provide more passenger legroom and luggage space without destroying the compactness of these 62-in.-high by 69-in.-wide sedans. West Coast p.o.e. prices are \$2112 for the Consul sedan and \$2465 for the Zodiac sedan. Other models include a Consul convertible, and a Zodiac convertible and station wagon.



ZODIAC

FORD TAUNUS



DYNA PANHARD is one of the most unusual cars to fall into our compact classification. It is an intriguing study in French engineering practice, as well as being a practical sedan for five or six persons.

Unique in this category is the two-cylinder aircooled engine which turns out 42 hp. Points of engine interest are hemispherical combustion chambers, aluminum cylinders with cast-iron liners and torsion bar valve springs. It falls victim to a characteristic of two-bangers—vibration, fierce during hard acceleration. No dragster, the car takes 30 seconds to reach 60; however, a top speed of 85 mph is available on demand. The wind-tunnel-designed body cuts air resistance to a minimum and literally adds extra horses and economy—up to 40 mpg is not unusual.

Interior is neatly arranged with all the controls mounted in or on an instrument shroud which surrounds the steering column. Ride is firm, but soaks up bumps and dips. The four-speed transmission is geared quite low in first and second so that heavy traffic involves considerable shifting. If you want something different, yet reliable and well-made, the Dyna Panhard is worth trying.

Specifications: wheelbase 101 inches, overall length 180.5, width 65.9, height 57. Price (p.o.e.): \$1995.

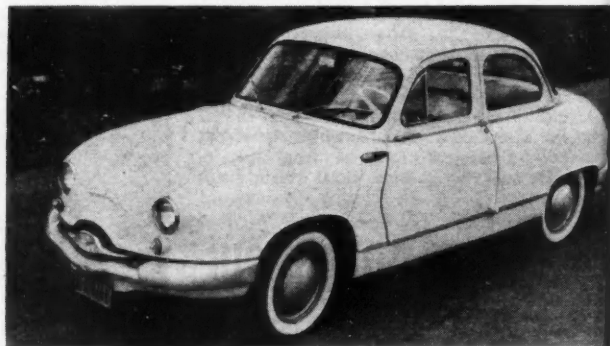
FORD'S GERMAN CAR, the Taunus 17-M, remains unchanged for 1959. It is still rather new, having made its American debut in mid-1958. Offered only with a 4-cylinder ohv, 103.6-cu. in., 67-hp engine, standard and deluxe models of the 2- and 4-door sedan and 2-door station wagon (all only 59 in. high) bring the models up to six choices. Comfort and quality finishes are emphasized by padded dash, rear seat folding armrests, adjustable front seatbacks, and completely synchronized 3-speed gearbox.

The Taunus sedan can be called a six-passenger car, but three in the front seat restrict the driver. Weighing in at 2260 pounds with 102.5-in. wheelbase, overall 172.2-in. length and 65.7-in. width, performance and maneuverability are good. Fuel consumption of 25 mpg at comfortable steady speeds of 65 to 70 mph, and a zero to 60 acceleration time of 20.3 seconds are excellent for a car with a \$2117 to \$2471 p.o.e. price tag.

Independent front suspension units of long shock absorbers with a coil spring on top are unique in that the shock is also the wheel spindle—about which the front wheels rotate for steering.

Optional items include overdrive and an automatic clutch called Saxomat that eliminates the clutch pedal. Taunus is a well-proportioned, compact car with American styling and German workmanship, with parts and service available at Ford dealers.

DYNA PANHARD



OPEL



THE OPEL, unchanged for '59, is a fine example of what happens when a good design is scaled down, rather than enlarged. There is strong Detroit influence in General Motors' handsome German-built sedan and the car is finding favor with the U.S. public.

Officially dubbed the Olympia Rekord, it offers five passengers adequate head- and leg-room but four will find more space. Inside and out, the Opel is a professionally-finished automobile, especially suited to big-city driving. It is maneuverable, handy to park, has wonderful visibility and a trunk capacity of 12 cubic feet.

The 1488cc (90.8-cubic-inch) overhead valve four develops 56 bhp. It should be good for a long life because of oversquare bore and stroke which reduces piston speed and decreases wear. Brakes are very good and the three-speed column shift lever works smoothly. Fuel economy falls between 22 and 26 mpg, depending upon driving habits. Comfortable cruising is 65 mph. Especially attractive is the fact that Opels are sold by most Buick dealers who offer service anywhere in the country.

Specifications: wheelbase 100 inches, overall length 174, width 63.6, height 59, curb weight 1995 pounds. Price (p.o.e.): \$1958. Also available is a station wagon for \$2370.

THE LARK FROM STUDEBAKER is an all-new "compact" car offered for 1959. A scaled-down version of bigger U.S. cars, the Lark has succeeded in providing reasonable comfort for six passengers with good performance, fuel economy and styling with a European flair. Instrumentation and interior appointments are simple and neat without being austere.

Gasoline mileage can be as low as 16 mpg or over 20 mpg depending on engine and transmission, as an L-head 90-hp, 169.6-cu.-in. engine, or a 180-hp, 259.2-cu.-in. V8 engine is available, as well as 3-speed manual transmission with optional overdrive, or an automatic transmission. The six cruises well at 70, and the V8 does not strain at 80 mph. The added weight of the V8 engine does not seem to affect handling of the coil spring independent front suspension; rear end holding is good with leaf springs and solid axle.

Passenger comfort is good for six persons, though long-legged ones might find rear legroom on the short side. Overall height of 57.5 in. leaves good headroom. A 2-door sedan and hardtop, and a 4-door sedan are available on a 108.5-in. wheelbase. A 2-door wagon with optional folding third seat is on a slightly longer 113-in. chassis. The rear facing third seat folds flat into the floor and is very short on legroom. Overall length of 175 in. (184.5 for the wagon) and width of 69 in. make the Lark easy to park and drive. Base prices (f.o.b. South Bend, Ind.) are \$1756 to \$2362.



STUDEBAKER LARK



BORGWARD ISABELLA

GERMANY'S ISABELLA has minor changes for 1959, mainly body modifications including rear fin and signal light incorporation, slightly larger luggage space made possible by raising the rear deck body line and front grille modifications. Unitized body-frame construction is used but the engine, transmission and front suspension are mounted on a sub-frame. This is then mounted in rubber to the body unit, reducing engine noise and vibration. Good riding comfort on rough roads is

supplied with the swing axle-coil spring rear suspension.

Designated as a 6-passenger, 2-door sedan, the 67 $\frac{1}{4}$ -in.-wide by 153-in.-long body on a 102 $\frac{1}{2}$ -inch wheelbase is really more comfortable for five average size adults. Headroom provided by an overall height of 57 $\frac{3}{4}$ in. allows easy entrance and exit.

A 4-cylinder, 91-cu.-in. ohv engine, developing 60 hp at 6.8 to 1 compression ratio, is standard. A modification, known as the TS

engine, develops 75 hp and is available as an option. Fuel consumption is in the 20-25 mpg city driving range, with as high as 28.5 recorded for highway cruising at 65 mph. The TS engine will accelerate the 2248-pound car to 60 mph in slightly over 16 seconds. Driving is easy with 3 $\frac{1}{2}$ -turn lock-to-lock steering and an all-synchromesh 4-speed transmission. Suggested p.o.e. price: \$2495.

Other models are a convertible hardtop coupe and a Combi station wagon.

VOLVO

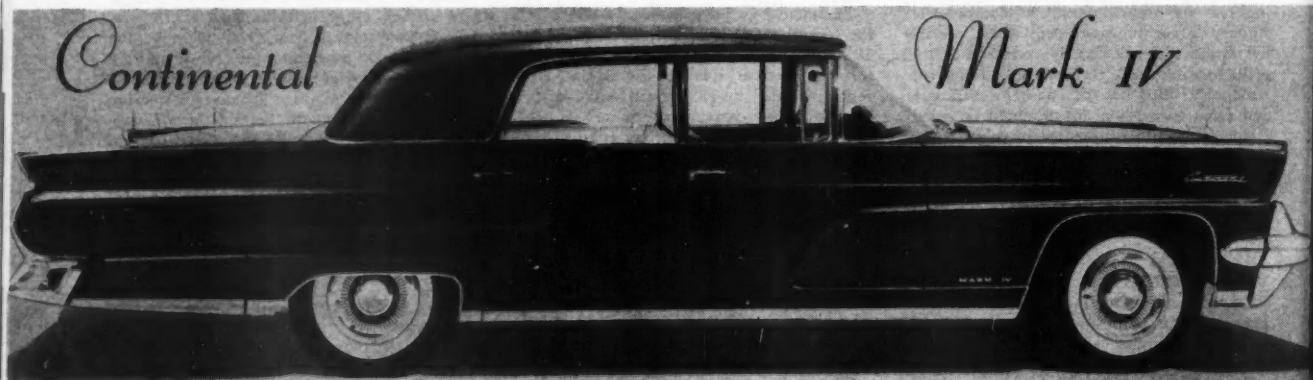
VOLVO FOR '59 has numerous detail improvements over the PV-444: larger rear window, redesigned and padded instrument panel, handbrake position relocated to between front seats for better accessibility, improved steering, and four-speed, all synchromesh gearbox (optional at no extra cost), ribbon-type speedometer with trip indicator, suspended throttle insulated from vibration, new combinations of color and upholstery.

The Volvo PV-544 is definitely economical to run and to buy. It gives about 25 miles per gallon, can accelerate to 60 mph in 13.5 seconds, will do the quarter-mile in 19.5 seconds, and cruise all day long at 60-70 mph. Cornering and braking are as good as most sportscars; it truly packs sportscar performance into a family sedan.

It holds four people easily, can squeeze in five. The front seats fold down, making into a bed for two. It's equally at home dodging through traffic, taking the family on a trip, or even entering competition. Specifications: wheelbase 102.5 inches, overall length 177, width 62.5, height 60.2, curb weight 2140 pounds.



LUXURY CARS



LARGEST AND GRANDEST of the Ford products is the Lincoln Continental Mark IV. The new square-cut styling features a wrap-around front bumper and new front and rear grilles. Buyers have a choice of 20 colors, except in the Town Car and Limousine, which are available only in black, and are fully equipped, including air conditioning.

The Continental engine has a capacity of 430 cubic inches and develops 375 bhp on a 10 to 1 compression. Drive is with a dual-range automatic transmission with optional limited-slip differential. Suggested 1959 prices: 2-door hardtop \$6598, 4-door sedan and hardtop \$6845, convertible \$7056, Town Car \$9208, Limousine \$10,230.

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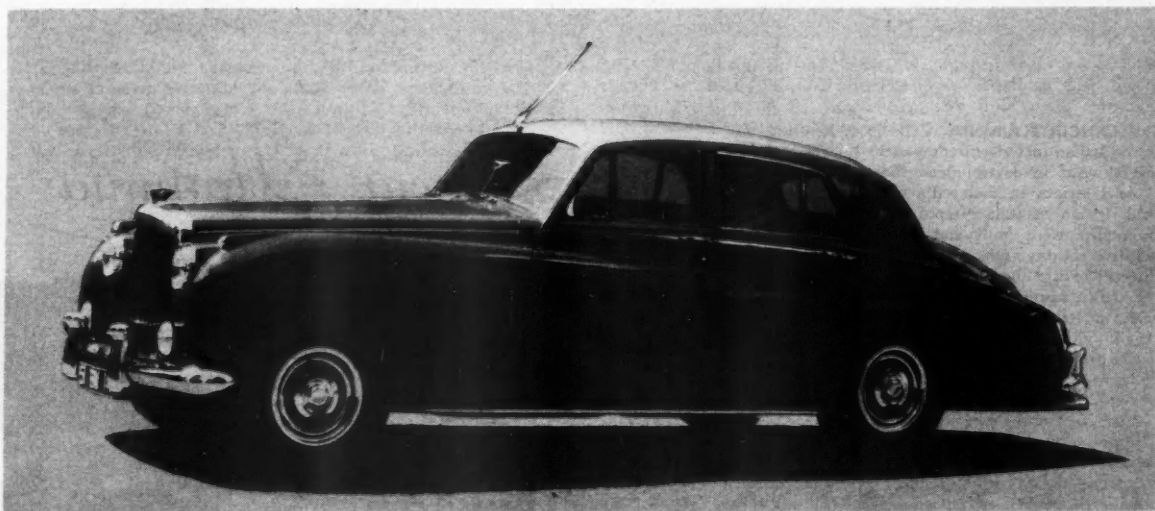
THE WORLD'S BEST CAR, and the fastest luxury car, aptly describe the Rolls-Royce and the Bentley, respectively. Except for the name, radiator and price, the cars are identical. Stylewise, they retain the air of elegance associated with England's conservative coach-builders. The interiors vary from polished wood trim to glove-leather padding, and are hand-finished to perfection. Hand-built from the ground up, these cars offer the customer anything he wants, for a price: indirect ceiling lights, bar, sandwich compartment, diamond-studded brocade upholstery . . . and in the case of one Indian Prince, a rolling bath-

room! Today's conveniences run along the lines of backseat television, fancy cocktail equipment, and perhaps a lady's vanity cabinet that folds out.

Mechanically the two cars are the same, except for optional gearing. The same six-cylinder engine of 4887cc (298 cubic inches) is used on both cars, along with the same chassis and suspension. An automatic gearbox made from British and American patents is also standard. Two other stock items are the one-shot lubrication system (which, when a button is depressed on the floorboards, shoots metered amounts of grease to

all lubrication points), and the ride control. You can make your rear shock absorbers stiff or soft with the flip of a lever. Another standard item is the servo-assisted brake system, which for a passenger car, is nothing short of phenomenal.

Perhaps the most famous feature of the cars is their silence. The engine runs smoothly, without vibration, and the gears are mated and run-in by stethoscope. Optional extras include electrically operated windows, power steering, and air conditioning. P.o.e. prices: \$13,750 for the Rolls Silver Cloud sedan, \$13,450 for the Bentley series S sedan.



Bentley



Facel Vega

FRANCE'S PRESTIGE CAR, the Facel Vega "Excellence" is unchanged outwardly. Under the hood, however, things have been changed. The car is now powered by a specially-built 360-horsepower Chrysler engine. With its new powerplant, the swanky four-door limousine can accelerate from a standing start to 60 mph in 8.5 seconds, to

100 mph in 21 seconds, and boasts a top speed in the neighborhood of 125 mph. Specifications: wheelbase 124.7 inches, overall length 206.7, width 72, height 54, front tread 56, rear 57, road clearance 7, weight 4230 pounds. Price (port of entry): \$12,800. Additional information about Facel Vega is listed on page 70.

THE LANCIA FLAMINIA is the most luxurious car of the Italian manufacturer's present line. It has been several years in development, indicating that Lancia is dead serious in their efforts to enter the luxury field. Italian magazines report that no less than six prototypes were built and demolished during exhaustive factory tests. Flaminia styling has been directed toward the American market, but done with the artistic restraint and expensive-looking lines common in Italian coachwork. It goes without saying that interior and exterior are superbly finished. Fresh air is drawn in through the front quarter-vents, and exhausted through rear vents—pushbutton operated from the dash.

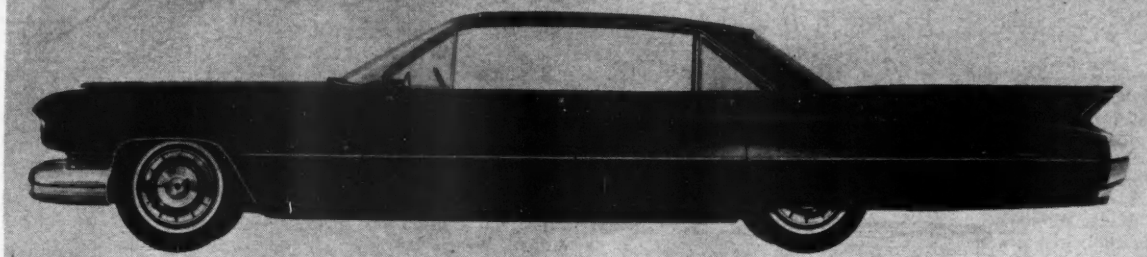
The front suspension has coil springs and wishbones, providing a luxurious ride. To maintain the fabled Lancia roadholding, the rear suspension has a deDion axle on half-elliptic leaf springs. Directional stability is perfect, and roadholding, while not quite up to stiffer-sprung Lancia competition cars, is excellent.

The six-cylinder, 2458cc-engine develops 112 bhp at 5200 rpm. It can propel the car from 0 to 60 mph in 16.6 secs., and has a top speed of 101 mph. Specifications: overall length 191, width 69, height 56, weight 3263 pounds. P.o.e. price: \$7460.

Lancia Flaminia



Eldorado Brougham



CADILLAC'S ELDORADO BROUGHAM for '59 was not a reality at presstime, for while Cadillac engineers were looking over Pinin Farina's shoulders in Turin, Italy, the prototype was entering its final stages of completion. (It will look like the above illustration.)

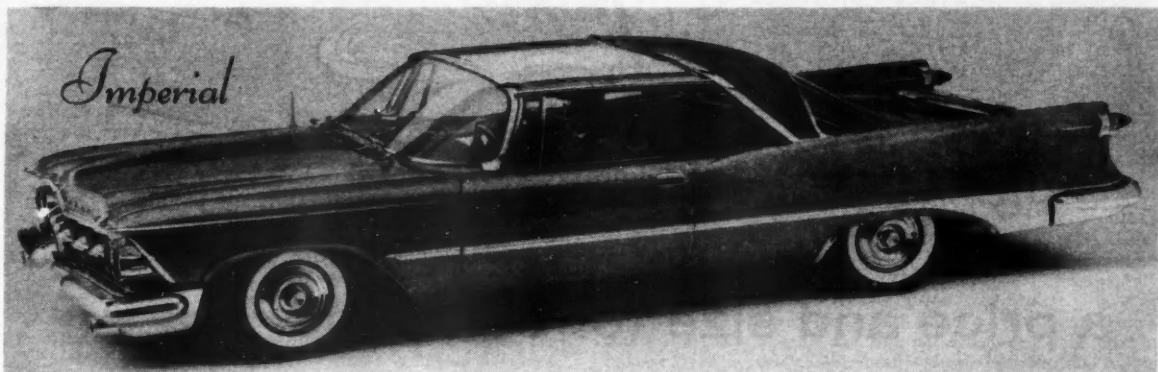
As last year, the manufacturer's suggested

price for this "new standard of the world in majesty" is \$13,074. The chassis is basically the same as in the standard Cadillac, and it uses the 345-hp Eldorado engine. There the similarity ends. On its special body can be put a choice of 15 acrylic lacquers exclusive to it, while Farina will finish off

the interior in 15 different combinations—available only in the Brougham.

Practically all "extras" are standard: air suspension, automatic throttle control for highway cruising, electric door locks, dual speaker radio with electric antenna, extra foglamps, power steering, and power brakes.

Imperial



ONE OF THE LUXURY LEADERS in the United States is the Imperial. From its stainless steel roof and plush swivel seats, to its upswept styling, the car shouts luxury. New for '59 is its frame, lowered floor, and a 413-cubic-inch engine developing 350 bhp.

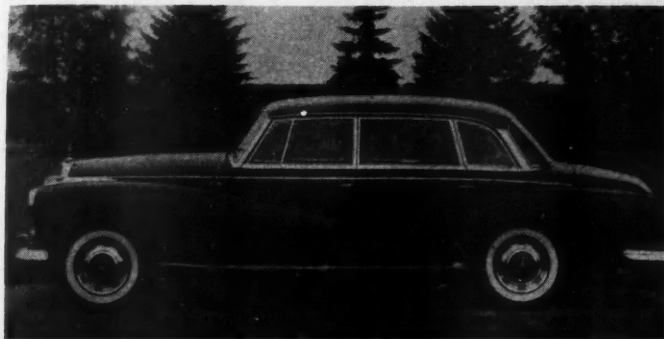
Ten models are offered for 1959 in three classes: sedan, 2-door

and 4-door hardtop, and convertible coupe. Prices range from \$4909 to \$6103. Overall specifications: wheelbase 129 inches, length 226.3, width 81, height 57, front tread 61.8, rear 62.4, clearance 5.8. Optional extras include the "auto-pilot," "Mirror-matic," and electronic headlight dimmer.

Mercedes 300

THINGS THAT MATTER, such as comfort, performance, roadability and safety, are some of the outstanding features which have placed the Mercedes-Benz 300 among the elite of fine cars. Its coachwork is built and finished by hand, and is "conservative-modern" in styling, with just enough chrome to set it off. The '59 series features more than 21 feet of glass area, with no side pillars. Visibility is nearly 360 degrees, with wrap-around windows fore and aft. The interiors, also hand finished, are luxurious and durable.

Power is supplied by a 180-bhp three-liter overhead camshaft engine, with fuel injection. This Mercedes-Benz patent employs a six-plunger pump to provide perfect injection timing through individual nozzles at each inlet port. Connected to the engine is a fully automatic Borg-Warner automatic transmission. In common with most of the M-B line, the 300 uses a single-pivot independent rear suspension developed in racing. It also has an electric, two-position leveler to compensate for heavy loads. Power steering and air conditioning are new for '59. Prices (port of entry): 300-C 4-door sedan \$7559, 300-D 4-door hardtop \$10,418, 300-SC convertible or roadster \$12,272.



ECONOMY CARS



a price and size for everyone



Auto-Union 1000, DKW

ALTHOUGH THE AUTO UNION 1000 AND DKW appear almost identical, there are significant differences. The two cars, which are unchanged for '59 from those sold during 1958, share a common body shell (the two-door hardtop coupe) with the same high degree of interior finish and workmanship. Visibility, seating and driving comfort are excellent. Unusual about the car is the upside-down, H-pattern, four-speed column shift.

Primary differences in the models are the larger three-cylinder, two-cycle engine and improved suspension in the 1000. Increasing the bore from 2.80 to 2.99 inches has raised displacement from 54.66 to 59.78 cubic inches. Comparative horsepower is 45 for the DKW and 50 for the Auto Union. Front suspension with transverse leaf and wishbones is the same.

Top speed and cruising are almost identical in both cars—78 to 80 mph. Acceleration to 60 mph in the DKW takes about 30 seconds, while the Auto Union is slightly quicker. Clutchless shifting via the Saxomat is an optional extra. Roadholding and cornering are definitely sportscar-like, to be expected with front-wheel drive. The rack-and-pinion steering is light but requires steady pressure while turning. Fuel economy will range from 19 to 27 mpg.

Additional models in the DKW line include two-door sedan, four-door sedan and a station wagon. Base price (New York p.o.e.) is \$2495 for the 1000 coupe and \$1995 for the DKW two-door sedan. Dimensions of the two-door hardtop are: wheelbase 92.5 inches, length 166.5, width 66.7, height 57.6, ground clearance 7.7, dry weight 1970 pounds.

Morris 1000



MORRIS 1000 FOR 1959 offers no styling or mechanical changes and only minor revisions in other departments. For driver convenience, the gear lever has been lengthened and brought nearer to hand. Additionally, footroom between brake and tunnel has been enlarged. Installation of door-operated courtesy lights and hinging of the passenger seat backrest complete the '59 changes.

The Morris is solidly built, economical and performs well. Top speed is just short of 75 mph; acceleration to 60 mph takes 28 seconds. Cruising at 60 mph is no problem and drivers may expect fuel economy in excess of 32 mpg. Ride is solid and somewhat on the choppy side on rough roads but roadholding is such that the Morris will outrun many bigger and more powerful autos on twisty mountain roads. The fact that the 37-hp, four-cylinder engine is trouble-free and easy to service appeals to reliability fans.

There is ample room for four passengers and a trunk space which can be extended into the back seat for lengthy items. Price (New York p.o.e.) is \$1495. Specifications: wheelbase 86 inches, length 148, height 60, width 61, ground clearance 7, weight 1770 pounds.

Austin A-40, A-55

AUSTIN'S '59 EXPORT LINEUP includes one brand-new model, the A-40, and another which retains all its 1958 features, the A-55. This is by no means the complete series as manufactured by the British Motor Corp. but represent the two cars they consider most saleable in and suitable for the U.S. market.

The A-40, styled by Italian Pinin Farina, is the result of a trend towards a new kind of small car—something between small sedan and station wagon. Crisp, uncluttered lines enclose four seats and unusual luggage space, and the rear seat backrest folds down for extra freight space. It utilizes the same engine, transmission and suspension units as the A-35 so that parts and service are readily available. The four-cylinder ohv engine (57.8 cubic inches) develops 38 bhp at 5000 rpm with the export compression ratio of 8.3 to 1.

Trim and finish are smartly done. Two-tone paint (black roof) is standard. A single combined instrument is placed in front of the driver and there is a closed glove box, parcel tray below the dash and fingertip lighting switch below the steering wheel. The entire instrument panel is padded with an anti-glare covering.

Driving position is admirable; the seat gives good support for back and thighs, the wheel is pleasantly angled and the remote gear lever (same as on the Austin-Healey Sprite) lies conveniently in the center with the stout pull-up handbrake lever. Pedals are well situated and heel and toe action is possible on brake and accelerator. Rear seat comfort is outstanding with plenty of headroom. Zero to 60 mph takes about 28 seconds with a maximum speed of 70. Dry weight of the A-40 is 1596 pounds. Other specifications: wheelbase 83.5 inches, length 144.3, width 59.4, height 56.8. Price in the U.S. will be about \$1800.

The A-55, designed to seat four or five, offers a bit more luxury, with fine leather upholstery and thick pile floor carpets. The smooth-running 91-cubic-inch engine, nearly identical to the MG-A, develops 51 hp with 8.3 to 1 compression. A semi-automatic transmission is offered, and with this option acceleration to 60 mph takes 25 seconds. Comfortable cruising at 70 is possible. The car corners well and steering remains light and true even at higher speeds. A-55 dimensions: wheelbase 99.3 inches, length 167, width 61.5, height 60.5. Port-of-entry price is \$2214.



AUSTIN A-40 SEDAN/WAGON



AUSTIN A-55 CAMBRIDGE FOUR-DOOR SEDAN



Metropolitan 1500

AMERICAN MOTORS' METROPOLITAN 1500 for '59 is continued from 1958 without significant change. English-built to U.S. specifications, it is marketed through AM dealers, giving it a natural distribution advantage over many imports.

Mechanically, it is a reliable piece of equipment. (Lotus uses the differential and rear axle in their Club models.) Engine is a BMC model similar to that installed in the MG-A but de-tuned to 51 hp. Top speed is just a bit over 75 mph with easy cruising at 60 to 65. A three-speed shift lever is column-mounted, making it possible for three to sit in the bench front seat. The rear is suitable for children or packages.

The Metro is economical to operate, giving 25 to 30 mpg, and is ideally suited for city traffic. There is excellent visibility and it is small enough to dart into spaces unsuitable for others. Steering is light, with some tendency to understeer; braking is smooth and fade-free. Also available is a convertible.

New York p.o.e. price of the Metropolitan 1500 is \$1626, convertible, \$1650. Specifications: wheelbase 85 inches, length 149.5, width 61.5, height 56, ground clearance 6.4, curb weight 1860.

Triumph Sedan

TRIUMPH CONTINUES ITS '59 SEDAN unchanged after a successful sales campaign last year. Public acceptance of the Triumph's squared-off lines has been surprisingly good and purchasers have found themselves with a first-rate utility automobile.

Steering is light and the car will dart nimbly through traffic or hold a straight course on the open road without effort. The 40-hp, 57.8-cubic-inch engine gets the car to 60 mph in just under 30 seconds. Cruising is about the same, with a top speed of 73 mph. Economy is a big point with Triumph; traffic-highway mileage is 28-39 mpg.

It seats four and the rear seat may be folded down to provide 30 cubic feet of useful cargo space, thereby creating a dual-purpose automobile. A four-door estate wagon with 38 cubic feet of storage is also available in the line. The sedan retails for \$1699, p.o.e. Dimensions: wheelbase 84 inches, tread 48.5, length 145, width 58, height 60, curb weight 1680 pounds.

A NEW ARRIVAL IN 1958, Toyopet will not change its Crown sedan for '59. Built to last, this six-passenger sedan is somewhat larger than most economy cars, a factor

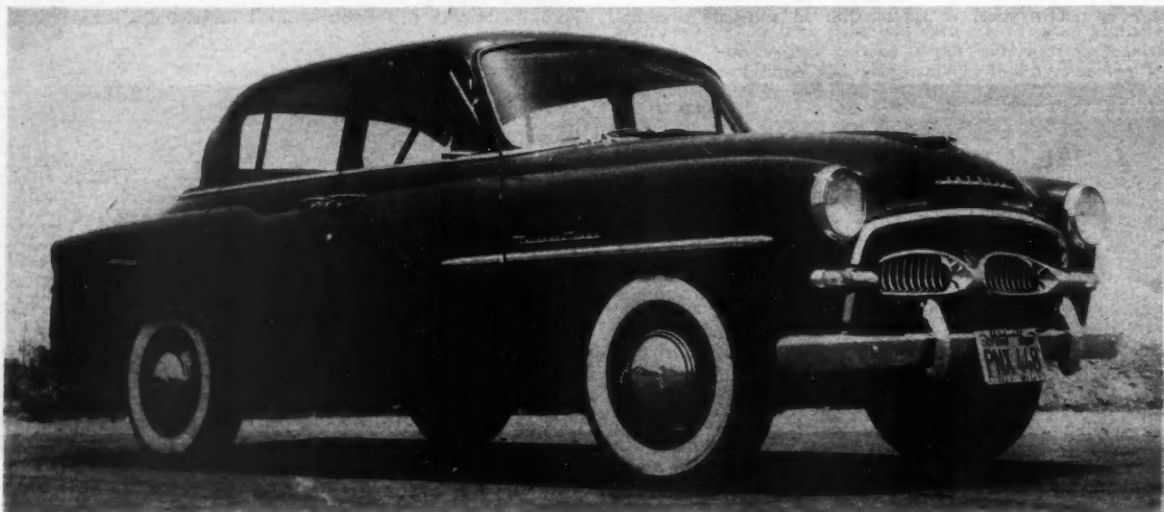
which should appeal to the driver who doesn't like a midget-car feeling. There is excellent head- and legroom, comfortable bench seating and ample luggage space.

A rigid box-frame and 16-gauge body steel contribute to a 2700-pound weight which cuts performance offered by the 60-hp, 88.7-cubic-inch engine. Acceleration through the four gears takes about 25 seconds to 60 mph; comfortable cruising is 60 to 65, and top

speed pushes just past 75 mph. Our overall gasoline consumption was 23.5 mpg for city and country driving. The Toyopet is a practical automobile intended to withstand the rigors of Japanese roads, considerably worse than those in the U.S.

Base price (Los Angeles p.o.e.) is \$2222. Dimensions: wheelbase 99.6 inches, length 175, height 60, width 66, front tread 52.2, rear 53.9.

Toyopet Crown





A RECENT ARRIVAL IN THE U.S., The Datsun will retain its 1958 qualities during '59. Functional simplicity is evidenced throughout from vinyl upholstery and headliner to easily accessible engine compartment with built-in work light. The car is on the heavy side (2519 pounds dry) and its 40-hp, four-cylinder engine, displacing 60.2 cubic inches, is working all the time. Reliability has been proven in Japan, where the Datsun is popular as a taxi.

Steering is light, and a turning radius of 16 feet allows easy maneuvering into tight places. Driver seating, instruments and suspended pedals are well arranged. Claimed top speed is 70 mph with cruising possible at 60. Acceleration is relatively slow, due to excessive weight, but it is this very weight which makes the Datsun so sturdy. A solid I-beam front axle and a 2 by 4½-inch box section frame appear rugged enough for a truck.

The 87.4-inch-wheelbase Datsun provides seating and legroom for four and a reasonably spacious trunk. Base price, \$1799.



ITALY'S MORETTI, the victim of on-again, off-again distribution over the past years, appears to have an organization behind it determined to sell in the U.S. market for '59. Due to low production, penetration will be limited, but consumers who do obtain a Moretti 750 will have an extremely unusual small sedan.

The single-overhead-camshaft 750cc engine puts out 35 hp at 4800 rpm and is used in the four-passenger sedan, coupe and station wagon. (A twin-cam, two-carburetor version is used in the competition car and a small Gran Turismo coupe.) Zero to 45

mph takes about 12 seconds; maximum speed is near 90.

Interiors are smartly finished in the best Italian style; an appealing touch is the use of a wood-rimmed racing steering wheel. Steering is rather slow but handling qualities on varying road surfaces remain good. It is necessary to keep engine revs up to avoid lugging in traffic. Although one of the most expensive economy cars—\$2495 for coupe or sedan—its 45 mpg should delight small engine devotees. Specifications: wheelbase 84.5 inches, length 145, width 57, height 57, ground clearance 8, weight 1840 pounds.

Citroën 2-CV

THE TINY 2-CV CITROËN offers absolutely nothing new for '59—and the company is not ashamed. This automobile is just about the ultimate in inexpensive, pure utilitarian transportation. There isn't anything about the car which can be called pretty or graceful, and this is one of the major reasons it hasn't sold well in the U.S. In other sections of the world there is a lengthy waiting list.

It offers fantastic economy—over 50 mpg on regular fuel—and the ability to go for unheard-of thousands of miles without repairs. Its two-cylinder-opposed, air-cooled engine displaces 425cc and develops only 14 hp, but that is enough to get through the four gears via a centrifugal clutch to 60 mph; comfortable cruising is closer to 45 mph.

This four-door sunroof sedan handles and corners well, thanks largely to front-wheel drive. It won't keep up easily with freeway traffic but it's an honest, basic automobile and at \$1298, p.o.e., it is cheap. Dimensions: wheelbase 93.3 inches, length 148.8, width 58.3, height 63, ground clearance 7.5. Curb weight, 1120 lbs.



THE RILEY ONE-POINT-FIVE FOR '59 is the same as the 1958 model, but so few have been brought into the U.S. that it is a new car for most Americans. Here is one of the fastest small sedans on the road, offering finish, equipment and performance unusual in cars of such compact overall size.

Horsepower, from the BMC 1489cc four-cylinder B-type engine, is a husky 68 at 5400 rpm and is sufficient to accelerate to 60 in about 18 seconds. Top speed is slightly over 85 mph. The Riley's interior is done in the fashion of British luxury cars with rich walnut dash paneling, deep pile carpets and seats in leather and leathercloth. Instruments are quickly readable and the floor-mounted four-speed gearshift is well positioned.

Four passengers will find a comfortable, pitch-free ride and drivers will appreciate excellent braking and cornering qualities. Eleven cubic feet of luggage space make the trunk a practical asset. East Coast p.o.e. price is \$2316. Dimensions: wheelbase 86 inches, length 153, width 60.5, height 59.8, ground clearance 6.5, curb weight 2060 pounds.

Riley 1.5



Goliath Hansa 1100



ORIGINAL PLANS FOR THE '59 GOLIATH were to change the name to Hansa, among other things. Outcome was to combine the names so that the car is now the Goliath Hansa 1100-B. The new sedan has a longer rear overhang, new instrument panel, slightly modified grille and freshly styled chrome side trim.

The Goliath is available with two engine options: both are reliable, water-cooled, flat-opposed fours. Standard is the 46-hp model, displacing 66.7 cubic inches. Getting up to 60 mph through the all-synchro four-speed gearbox takes slightly over 20 seconds and top speed (also cruising) is in excess of 75 mph. The other engine, standard on the Empress sedan, has the same displacement but develops 63 hp due to higher compression and dual carburetors. Coupling this engine with higher gear ratios places top speed nearer 90 mph.

Economy—30 to 35 mpg is normal—and good handling are characteristic of the front-wheel-drive German Goliath. Four people ride in comfort and luggage room compares very favorably with other small sedans. No dimensions were available on the 1100-B at presstime. Base price (p.o.e.) is \$1995; the Empress costs \$2481.



Saab 93-B

SWEDEN'S UNUSUAL SAAB remains unaltered for '59. Although U.S. distribution is concentrated in the East, this does not make the 93-B any less desirable. The three-cylinder, two-cycle engine, driving the front wheels, is capable of brisk performance which belies its 46 cubic inches and 38 bhp. Terrific handling qualities have been proven during rally and race wins. Maximum speed is slightly over 70 mph and acceleration to 60 takes just over 30 seconds. Fuel consumption is in the high 30s.

Interiors are comfortable and carefully finished. A heating system which defies sub-zero weather is standard. The rear seat is adjustable for height—good for kiddies who enjoy watching scenery—and front seats fold into a bed arrangement. An option is a cleverly combined shoulder harness and seat belt. A Gran Turismo version (See page 67) with increased horsepower is available.

East Coast port-of-entry price of the 93-B is \$1895; add \$100 for automatic clutch. Dimensions: wheelbase 98 inches, length 158, width 62, height 58, ground clearance 7.5, tread 48, curb weight 1806 pounds.

HILLMAN CONTINUES their Minx and Husky for '59 with major improvements in the already excellent Minx and virtually no alterations to the versatile Husky. Starting with a widened grille, exterior color and trim on the Minx have changed. Inside, deeper seats add comfort. The dashboard contains easier-to-read instruments, and new insulation lowers the noise level for passengers. Most important, the 1390cc engine has been enlarged to 1494cc (91 cubic inches) and power raised to 52.5 bhp. With the higher speed rear axle which has been installed, engine revs are reduced and Minx performance has been increased slightly at both top and low ends. Acceleration to 60 mph takes about 23 seconds; top speed just passes 80 and comfortable cruising is from 60 to 65. Fuel consumption is greatly affected by driving habits, but 25 to 30 mpg is an average range.

It is easy to treat the Minx as something of a sportscar on the road; eager throttle response, a positive shift lever and suspension which stays flat, eating up rough roads, are positive factors. City driving is aided by good visibility and a high enough seating position to see other traffic. Four passengers will find ample space, but a fifth will be a tighter fit. Trunk compartment is more than ample. Also available in the Minx line are two- and four-door station wagons and a convertible.

As a compact four-passenger and luggage (or two-passenger and cargo) utility car, the Husky fills an important gap in the low-cost field. With the rear seat folded there is 41.5 cubic feet of cargo space which will hold 600 pounds of freight.

Engine is the 43-bhp four-cylinder unit proven in earlier Minx models. Top speed is just over 70 mph and acceleration to 60 takes just 27 seconds. Cruising is possible up to 65 mph, but noise level becomes high. It rides comfortably, holding an accurate



Hillman Minx and Husky



HILLMAN HUSKY STATION WAGON

line in crosswinds. Steering is light and accurate and the feeling is that this car is a cinch to drive anywhere.

New York p.o.e. price of the Minx Special sedan is \$1699, Deluxe \$1849, convertible \$2099, four-door station wagon

\$2299. The Husky lists at \$1639. Minx specifications: wheelbase 96 inches, length 163, width 61, height 59.5, curb weight 2221 pounds. Husky specifications: wheelbase 86 inches, length 160, width 61, height 61, curb weight 2106 pounds.

Goggomobil



RELATIVELY NEW IN THE U.S. MARKET, the Goggomobil will be imported during '59 in two series and three models. Smallest of the group is the T-400, available in a smart miniature coupe and a somewhat slab-sided two-door sedan. Larger, but still skirting the minicar field, is the T-700 sedan, which will be introduced in the U.S. during this year.

The 400 has a lot of charm. It is extremely economical—40 mpg and more—offers all-independent suspension and exceptionally good handling. A two-cylinder, two-cycle engine mounted aft develops 20 hp from 392cc (24 cubic inches). Acceleration to 45 mph takes 17 seconds, cruising is at 55, and top speed is approximately 60 mph. A pre-selector gearbox is an unusual and desirable option. The coupe accommodates two, with a children's seat in the rear and luggage space in front; sedan seating is adequate for four.

Power for the 700 is derived from a two-cylinder, four-cycle opposed engine conventionally front-mounted. The 682cc (42-cubic-inch) unit develops 30 hp with economy equivalent to the 400. Advantage of the 700 is greater passenger and luggage space and styling more attuned to American tastes.

Price of the 400 sedan (New York p.o.e.) is \$1160; with sunroof, \$1280; coupe \$1560. Price of T-700 not available at press-time. Specifications of the 400 sedan: wheelbase 70.8 inches, length 114.3, width 50.5, height 51.5, curb weight 915 pounds. T-700 specifications: wheelbase 79 inches, length 133.8, width 57.3, height 53.8, dry weight 1372 pounds.

NEWEST MEMBER OF THE LLOYD FAMILY is the Alexander TS, which was introduced in the fall in Germany. Major exterior difference from the existing Alexander sedan is a new grille. Under the hood is the same basic 596cc (36.4 cubic inches) air-cooled engine as in the 600 and Alexander series, compression is up from 6.6 to 7.2 to 1; valves and intake ports have been enlarged.

Although a truly small car, it is built with care and precision. Many features generally associated with more expensive autos are utilized, including an all-synchro four-speed gearbox, a trailing arm and coil spring rear suspension, and rack-and-pinion steering.

There is space for four passengers, plus luggage. It can cruise at close to its top speed of 70 mph. Gasoline mileage is remarkably good—47 to 55 mpg. With its front-wheel drive, the TS sticks well and corners with the tenacity of a mountain goat. This new version should find a good sales climate in the U.S.

No U.S. price was available for the TS at presstime. New York p.o.e. price of the 600 two-door sedan is \$1395. Specifications of the TS: wheelbase 78.8 inches, length 132.1, width 55.8, height 55.1, dry weight 1240 pounds.

Lloyd

Simca Aronde



SIMCA ARONDE FOR '59 has been given a new line of bodies with oval grille, lower hood, deeper windshield, larger glass area all around and a slimmer roof. A redesigned floor has increased legroom by about 1½ inches and the flat roofline gives better rear headroom. Seats are improved and there is a wide array of new color combinations. Only detail changes have been made to mechanical parts. Two engines are made, both ohv fours of 1290cc displacement. One develops 48 bhp at 4800 rpm and the other 57 bhp at 5200. Until summer, only the lower-powered unit will be imported. At that time, additional models with more deluxe features (Elysée and Montlhéry) and a pair of two-door hardtops (Grand Large and Monaco) will be available in the U.S. Also arriving then will be the four-cylinder or V8 Ariane, resembling the earlier Versailles.

The Aronde (officially the P-60) has a top speed of over 80 mph, and one of its more notable features is the ability to accept high average speeds flat-out over impossible road surfaces, largely the result of excellent suspension and light, dead-accurate steering. Fuel consumption is among the best, running upwards of 32 mpg even at fast cruising.

Eastern p.o.e. Aronde price: Deluxe \$1808, Super Deluxe \$1908. Specifications: wheelbase 96.3 inches, length 162.5, width 62.6, height 56.8, curb weight 1995 pounds.

Skoda

THE SKODA, a product of Red Czechoslovakia, doesn't go in for frequent model changes so that you may be sure the '59 Skoda 440 sedan is pretty much the same as the '58. Its 66.4-cubic-inch, four-cylinder engine develops 40 hp, enough to accelerate to 60 mph in 34 seconds and reach a top speed of 70 mph. There is no complaint with fuel consumption, which ranges from 27 to 36 mpg.

Surprisingly well-built, the Skoda has four-wheel independent suspension which enables it to skitter across rough surfaces in a sure-footed manner and take corners that would be suicidal in larger sedans.

Seating for the driver is good and he will find the panel well laid out with three hooded circular instruments in line of vision above the steering column. The car accommodates four and a modest amount of luggage.

Eastern p.o.e. price of the 440 is \$1686; the 445 with five more horses costs \$1787. A sports convertible will be available soon. Specifications: wheelbase 94.5 inches, length 160, width 63, height 56.1, ground clearance 7, curb weight 1984 pounds.



FIAT FIELDS AN EXTENSIVE GROUP of economy cars for 1959, all of them essentially the same as those sold last year. Something for everyone might well be the company's theme; their series includes the 500, 600, 1100 and 1200 models—all noted for quality construction, low operating cost and the ability to perform well within the limits of varying size engines.

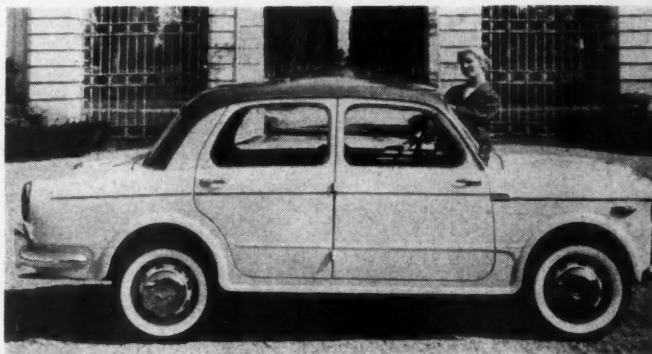
Very nearly in the minicar class, the 500 sunroof two-door sedan is a big seller in Europe and is gaining popularity in the U.S. An ohv, air-cooled vertical twin displaces 29.2 cubic inches and develops 16.5 hp. It accelerates smoothly to 40 mph in about 40 seconds, corners fast without roll or the tail-heavy sensation of many rear-engined cars and cruises happily at 45. Fuel consumption runs about 50 mpg. Two persons ride with ample head- and legroom seated on comfortable fabric pads over rubber bands, with additional seating or luggage space behind. Base price of the 500 is \$1098. Dimensions: wheelbase 72.5 inches, length 116.5, width 52.3, height 52.5, dry weight 1036 pounds.

In appearance, the 600 two-door sedan appears to be a scaled-up 500 but there is a considerable difference. Power is derived from a 38.6-cubic-inch rear-mounted ohv four which develops 22 hp, increases acceleration accordingly, and gets 40 mpg. Fast cornering is done with a sense of security and the ride, while firm, smooths out rough roads in a gratifying manner. There are no frills inside, but it is adequate transportation for four. The 600 sells for \$1298. Measurements: wheelbase 78.8 inches, length 129.4, width 54.4, height 55.4, dry weight 1288 pounds. Also available is a sunroof model and the Multipla—a four-door station wagon.

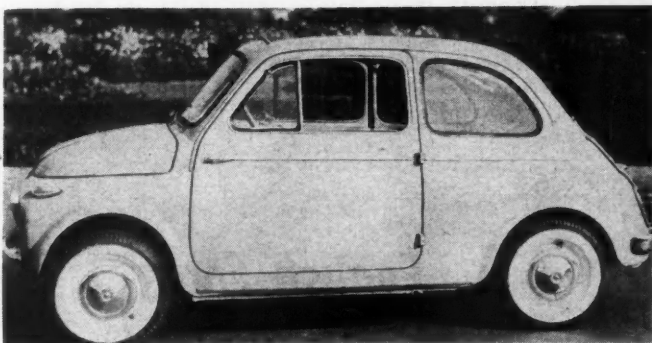
The 1100 four-door sedan is one of the finest small sedans in the world. Body design is neatly proportioned and there is comfortable seating for four or five. A 66.4-cubic-inch ohv four-cylinder engine develops 43 hp, enough for brisk acceleration and comfortable cruising in the 70-mph range. Fuel economy ranges from 25 to 30 mpg. Handling is really superb and the feeling is that here is quality automobile built to be driven and enjoyed without pampering. Available on the same chassis is a businesslike four-door station wagon. Port-of-entry price of the sedan is \$1683. Dimensions: wheelbase 92.1 inches, length 154.4, width 57.5, height 58.7, curb weight 1940 pounds.

Most luxurious of the Fiat line to be exported is the 1200 Gran Luce, available in either four-door sedan or Spyder with a sportscar-type convertible body. Engine, 85 cubic inches, is slightly larger than the 1100 and turns out 55 hp at 5300 rpm. Luxurious interiors and excellent visibility through large glass areas mark the 1200. Top speed is about 85 mph, with 56 mph possible in third gear. Handling is comparable to the 1100 and gasoline mileage is approximately the same. The 1200 four-door sells for \$2253. Measurements: wheelbase 92.1 inches, length 154.4, width 57.5, height 57.7, curb weight 2050 pounds.

Fiat



FIAT 1100 FOUR-DOOR SEDAN



FIAT 500 TWO-DOOR SEDAN WITH SUNROOF



Renault Dauphine

RENAULT FOR '59 has detail modifications to engine and new colors for finish and upholstery. The compression ratio has been raised from 7.75 to 8 to 1, and a new type of distributor is said to improve gasoline mileage. Five new colors have been added to match new upholstery shades. Retraction controls for heater and defroster complete the changes.

The rear-mounted 845cc engine gets the city-handling Dauphine to 60 in just under 30 seconds with a top speed just exceeding 70 mph. Regular gas is permissible, which adds to the already thrifty 40-mpg economy. Great in city traffic and a breeze to park in tight spaces, the Dauphine accommodates four passengers who may stow a limited amount of baggage under the hood.

Also available in the Renault line is the 4-CV, a smaller, slightly more tuck-n-roll for \$1545. New York p.o.e. price for the Dauphine is \$1645. Specifications: wheelbase 80 inches, length 132, width 60, height 57, ground clearance 7, curb weight 1900 pounds.



Volkswagen

MUCH OF VOLKSWAGEN'S POPULARITY has been built on resistance to change, and '59 is no exception—there are no changes. Their "big" modifications came in 1958, when they enlarged the rear window and moderately restyled the interior.

VW builds a two-door sedan, a sunroof and full convertible, plus a line of roomy transporters and the handsome Karmann-Ghia coupe and convertible. All-independent torsion bar suspension provides an exceptionally fine ride and excellent handling characteristics. The rear-mounted air-cooled, opposed four-cylinder engine is responsible for gasoline mileage which ranges from 32 to 40 mpg. Top speed and cruising are the same—about 70 mph, a speed which can be held all day long without fear of engine damage.

Four adults can ride in comfort and will find a fair amount of luggage space behind the rear seat plus some storage alongside the gas tank under the hood. This is one of the best-constructed, most reliable mass-produced small sedans anywhere—a great dollar buy at \$1545, New York p.o.e. Dimensions: wheelbase 94.5 inches, length 160, width 60.5, height 59, ground clearance 6, curb weight 1609 pounds.

English Fords (Anglia, Prefect)

FORD ANGLIA AND PREFECT, sister automobiles, are unchanged for 1959 from the '58 versions. Basic difference in the two automobiles lies in the fact that the Anglia is a two-door and the Prefect a four-door sedan. Except for weight, the dimensions and specifications on the two cars are identical.

Powerplant, a side-valve four seldom used in these days of overhead valves, develops 36 bhp at 4500 rpm and displaces 1172cc (71.5 cubic inches). A rugged three-speed transmission operates through a floor-mounted lever. Interiors are functional and neat: instruments are grouped in two dials in front of the driver; a locking glove compartment is included; seats are foam rubber and headliner is washable plastic.

Quick steering response ($3\frac{1}{4}$ turns lock-to-lock) and lively top-gear acceleration suit the two cars beautifully to crowded traffic conditions. Driver visibility is good and four passengers will find good leg-, head- and hiproom with space for vacation luggage in the trunk. Top speed is about 72 mph with cruising nearer 60 to 65. Gasoline mileage is another strong point and careful drivers can get up to 40 mpg.

Deluxe versions of both cars include more chrome and better finished interiors. Available on the same chassis are two station wagons, the Squire for \$1739 (New York p.o.e.) and the Escort at \$1629. Base price of the standard Anglia is \$1442, Prefect, \$1495. Specifications: wheelbase 87 inches, length 149.8, width 60.8, height 58.5, ground clearance 7, curb weight (Anglia) 1684 pounds, (Prefect) 1736.



FORD ANGLIA TWO-DOOR SEDAN



FORD PREFECT FOUR-DOOR SEDAN

Sunbeam Rapier

SUNBEAM'S RAPIER FOR '59 is unchanged from the high-quality touring semi-sportscar that it was in 1958. A responsive 1½-liter four-cylinder engine turns out 68 bhp at 5200 rpm. Reliability is a keynote of the entire automobile as evidenced by top showing in major European rallies.

Light, sensitive steering provides good handling over rough surfaces, and mountain drivers will appreciate some of the best small-sedan brakes on the road. Interiors are upholstered in leathercloth with typical Rootes attention to detail. Aside from providing excellent motoring for four, the Rapier is economical to operate. It gives from 25 to 30 mpg (better with optional overdrive) and will accelerate to 60 in 19 seconds. Top speed is 88 mph and it cruises easily at 60-70.

At \$2499 (New York p.o.e.) the Rapier is a good value in a small sedan which goes beyond providing bare transportation necessities. A convertible costs \$2649. Specifications: wheelbase 96 inches, length 163.5, width 60, height 58, ground clearance 5.8, curb weight 2370 pounds.



Lancia Appia sedan



LANCIA'S APPIA SEDAN, though not new for '59, is a new regular import to the U.S. Its price (\$3298) raises the question as to how successful it will be competing against economy cars of half the price. However, for those who appreciate a finely made and wonderfully engineered motorcar, the Appia fills the bill.

The unit four-door body is completely pillarless so that opening front and rear doors exposes an opening the length of the car's cab. Engine design is an unusual V4, which Lancia has developed to a high degree. It develops 43.5 hp at 4800 rpm from 1090cc, sufficient for a top speed of 80 mph and cruising very near that. Roadholding and brakes are superb; four passengers will find some of the most comfortable motoring of any small sedan in the Appia. Interior finish and upholstery are comparable to the luxury models Lancia manufactures. Economy-minded motorists will find that 35 mpg is normal consumption.

Specifications: wheelbase 98.9 inches, length 158, width 56, height 55.5, curb weight 1860 pounds.



VAUXHALL VICTOR, GM's English car, retains its 1958 characteristics for the coming year. Merchandised through selected Pontiac dealers in the U.S., the Vauxhall could almost be a scaled-down Pontiac of a few years ago. It definitely reflects its designed-in-Detroit heritage from its wrap-around windshield (nearly distortion-free) to bumpers with exhausts protruding through the tips. Seats, very comfortable, hold driver in a position

good for many miles. The Vauxhall seats five and includes a bigger-than-average trunk compartment.

Performance, from the four-cylinder 54.8-hp engine, is roughly equivalent to the VW's. Acceleration to 60 mph takes about 31 seconds with a top speed of 72 mph. Despite its somewhat limited speed, the car is fun to drive. It whips around corners without any tendency to break loose but there is

considerable lean and squeal from the 13-inch tires. Brakes are more than adequate and stop straight without fade. Excellent fuel economy is in the neighborhood of 28 to 31 mpg.

New York p.o.e. price for the Vauxhall Victor is \$1958. A station wagon costs \$2370. Specifications: wheelbase 98 inches, length 168, width 62.5, height 57.5, ground clearance 6.6, curb weight 2175 pounds.



GRAN TURISMOS

a touring car with sportscar flair

ABARTH



IN THEIR U.S. DEBUT AT SEBRING the tiny Abarth-Fiat-Zagato team came away with a big first in class in the Gran Turismo division. The little coupe is built on a stock Fiat 600 sedan chassis, with a highly modified engine, rebuilt at the Abarth factory. The custom-built aluminum body is added at the Zagato factory, in Milano. Abarth-Fiat's have been a mainstay in Italian competition for many years, but this is the first of these hot little machines to be exported to the United States on a semi-mass production basis.

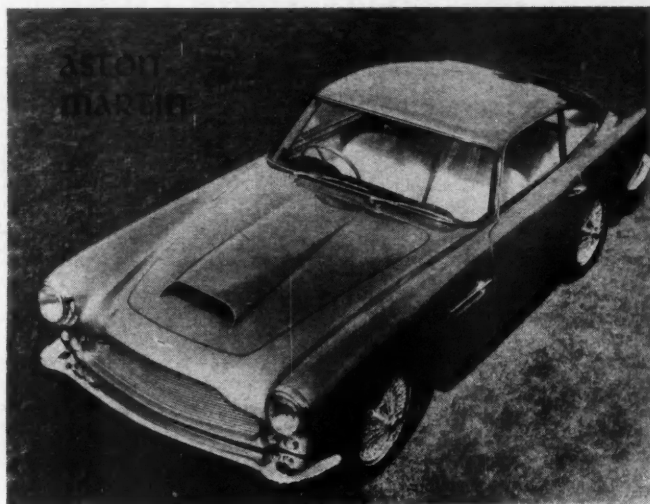
From the leather-covered roll bar, to the beautifully styled dash, the interior is excellent. For such a small car, the usable space is amazing. Legroom is ample for six-footers, with several feet of stowage room behind the twin bucket seats. Fresh air is drawn through the windows and exhausted through scoops sculptured into the sides of the rear window pillars.

The Abarth "Derivation" kit raises the stock horsepower from 22 bhp to a full 43 bhp at 5800 rpm, and is accomplished in the same general manner as on the Nardi-Vignale Sprint Coupe. Compression has been raised to 9.8 to 1, and capacity to 747cc (46 cubic inches). The four-speed gearbox is synchronized in the top three gears, and the final drive gears are incorporated in the gearbox. Specifications: wheelbase 78.8 inches, overall length 132, width 53, height 46.5, front tread 45.3, rear 45.5, clearance 7, weight 1200 pounds. Price (port of entry): \$3460.

AN ALL-NEW GRAN TURISMO CAR has been announced by Aston Martin. Designated the DB-4, the new machine incorporates the latest engine and suspension features evolved from the factory racing cars. A direct development from the DBR-2/370 competition mill, the all-new engine is a 6-cylinder of 3.7 liters (3670cc), with seven bearings, a light alloy head and block, and a chrome molybdenum steel crankshaft. With a compression ratio of 8.2 to 1, it develops 240 bhp at 5500 rpm. During runs at the MIRA proving grounds, the DB-4 repeatedly accelerated from zero to 100 mph and braked to a standstill in 27.2 seconds! Braking is with Dunlop discs.

The platform chassis has a superstructure of light, small diameter welded steel tubing—to which are fastened the window and door frames. Touring-designed body panels are welded to this framework, forming a true "Superleggera" shell. Suspension at the front is of the wishbone type, with ball pivots and telescopic shocks inside coil springs. The rear uses coils aft of the axle, with parallel trailing arms and watts linkage for location. Specifications: wheelbase 98 inches, overall length 176, width 66, height 50.5, front tread 54, rear 53.5, weight 2884 pounds. Approximate p.o.e. price: \$9230.

The DB Mark III convertible and hardtop are to be continued. A hydro-booster has been added to the braking system, with discs at the front, and Alfin bi-metal drums at the rear. Several stages of engine tune, and a special 3-liter competition mill are listed as optional extras. Base prices remain the same for 1959: coupe \$7550, convertible \$8190.



IN STOCK TRIM THE GIULIETTA SPRINT coupe rates near the top in roadability. In its hopped-up version, the Giulietta Sprint Veloce is breaking International Gran Turismo records left and right. Style-wise, the Giulietta Sprint exemplifies the finest in Italian design and coachwork.

Except for minor grille changes, plush interior decor, and the added grace of the fastback hardtop, the Sprint coupes are mechanically identical to the Spider versions listed on page 41.



alfa
giulietta
sprint

JAGUAR XK-150

SUBTLE CHANGES in styling and running gear, plus new spot brakes adapted from the racing C Jags, have placed the XK-150 hardtop coupe in the upper echelon of the Gran Turismo class. The XK series is powered by the 210-hp "blue top" mill used in the 3.4 sedans.

In addition to the closed top, the coupe features occasional seating for two in addition to the very comfortable foam rubber bucket-type units. Specifications: wheelbase 102 inches, overall length 177, width 64.5, height 55, front tread 51, rear 51.6, clearance 7.5, weight 3172 pounds. Price (port of entry): \$4475.



MASERATI 3500



NOW OUT OF FINANCIAL DIFFICULTIES, the Maserati factory is once again manufacturing their beautiful 3500 Gran Turismo coupe. The Touring coachwork is exactly what one would expect of Maserati—modern, low, slinky, and handbuilt to perfection. In addition to superlatives of styling, the Touring designers have provided plenty of lockable trunk space, plush bucket seats, comfortable occasional rear seating for two, and excellent visibility.

The 3500, with its 212-cubic-inch, 240-bhp engine, is capable of a true top speed of 145 miles per hour. The fully synchromesh four-speed gearbox, and servo-assisted brakes, provide a wide mar-

gin of control and safety at high speeds. In the interests of comfortable long-distance touring, springing has been softened at the rear, and stiffened at the front to prevent roll. Recent detail modifications have closed the power gap at low speeds, and the car can now be used in slow traffic without stalling, or fouling the plugs.

With their present 20-car a month production of GT coupes finding a ready market, the factory is designing a full-bore Turismo coupe to challenge the Ferraris. Specifications: wheelbase 102.3 inches, front tread 54.7, rear 53.5, turning circle 36 feet. Price (port of entry): \$11,500.

BORGWARD

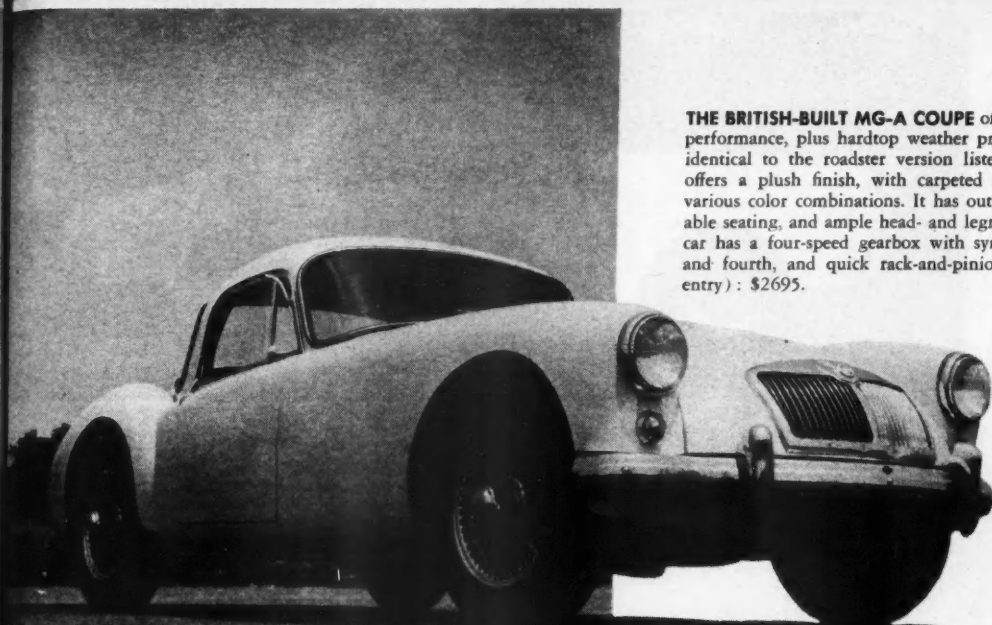
ALTHOUGH DESIGNED FOR AMERICAN TASTES, The Borgward Isabella Coupe clearly betrays its European ancestry. The first impression one gets from just sitting in the car, is that the coupe is both plush and solidly built, and as time goes by, these suspicions become factual.

The coupe is built on the basic sedan chassis, with its swing axles and proven components. Power is supplied by their 85-hp TS engine, delivers a top speed in the 90s, and fuel consumption between 20 and 30 miles to the gallon. It has a four-speed (all synchromesh) transmission, excellent brakes, comfortable ride, and the roadability of a sportscar. Specifications: wheelbase 102.5 inches, overall length 175.5, height 58.5, front tread 52.6, rear 53.6, weight 2415 pounds. P.o.e. price: \$3695.



PORSCHE 1600

DEVELOPED THROUGH RACING, the Porsche name needs no introduction; it stands for speed, handling, reliability and craftsmanship. Surgical-like precision in engine assembly, strongly welded unitized bodies, and suspension development through tough international competition, have paid off for the "silver spoons." As a result, the basic Porsche coupe seems to be the answer for rallies, Gran Turismo events, production racing, or just plain Sunday driving. Prices (port of entry): 70-hp Standard, \$3665, 88-hp Super, \$4115, 115-125-hp (Carrera), \$5665. Specifications (Porsche convertible) are listed on page 43.



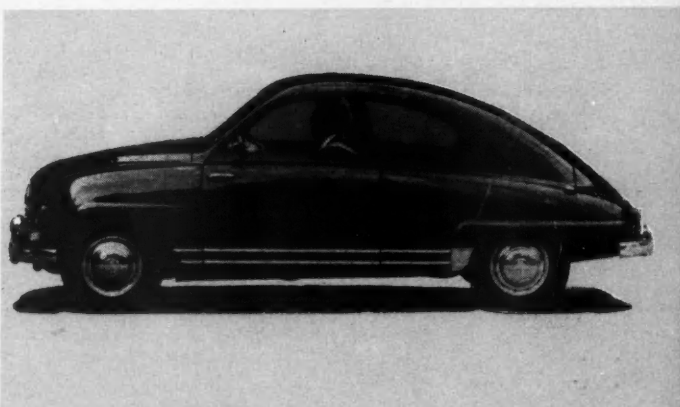
THE BRITISH-BUILT MG-A COUPE offers 100-mile-per-hour road performance, plus hardtop weather protection. Mechanically it is identical to the roadster version listed on page 39. The coupe offers a plush finish, with carpeted floors and leather trim in various color combinations. It has outside door handles, comfortable seating, and ample head- and legroom. Like the roadster, the car has a four-speed gearbox with synchromesh in second, third and fourth, and quick rack-and-pinion steering. Price (port of entry): \$2695.

mg-a

saab gt

THE SAAB 750 GRAN TURISMO was designed as a contender in class H production racing, and as a ready-to-run rally machine. The tear-dropped two-seater is equipped with a 50-hp version of the standard 38-hp SAAB three-cylinder. In addition to this boost, a tuning kit is available for bolting on an additional seven hp. Brake lining area has been increased from 90 to 105 square inches, to keep up with additional performance.

The Gran Turismo will top 93 mph in 50-hp trim, and 100 mph with the tuning kit. Heater, safety door locks, Halda Speed Pilot, tachometer, fog lights, competition steering wheel and Pirelli racing tires are standard equipment. Price (port of entry): \$2568. General specifications: same as SAAB 93B, page 58.



nsu prinz

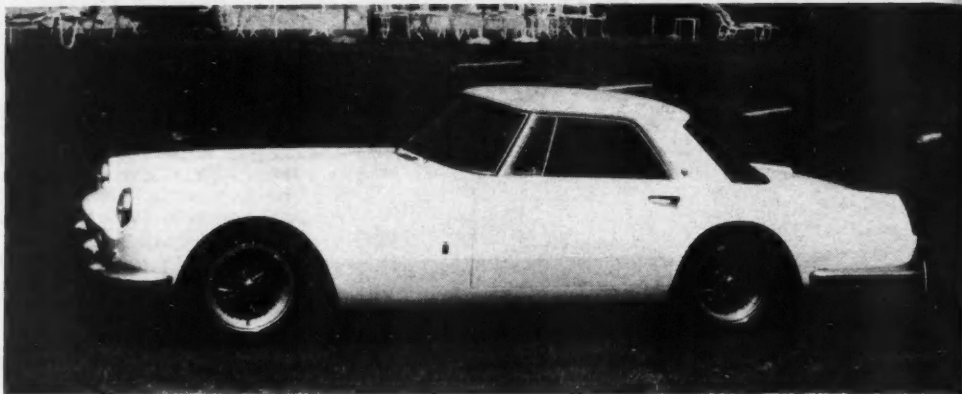


THE SMALLEST CAR in MT's G.T. listing is the NSU Sport Prinz. It is the first high performance machine to evolve from Europe's Minicar period. Using NSU's Prinz four-seater as a starting point, the factory engineers and Bertone stylists have come up with a very pleasing package. Overall styling resembles the Alfa Romeo Giulietta Sprint Coupe—with definite elements all its own.

Power for the little car is supplied by a vertical two-cylinder, air-cooled, rear-mounted engine of 583cc (36-cubic-inch) displacement. At 5700 rpm, the little mill develops 30 bhp, providing remarkable performance for its size: 19 mph in first, 38 in second, 61 in third, and 85 flat-out in fourth. Zero to 40 takes just under 10 seconds. The engine is mounted in unit with the gearbox and differential. Up to 47 mpg is claimed.

The all-independent suspension is with coils and wishbones at the front, and by swing axles with concentric coils and shocks at the rear. Seating is for two, with room for an occasional bench-type seat, or stowage, in the back. Rack-and-pinion steering, four-wheel hydraulic braking, and 4.40 x 12 tires complete the picture. Price (in Germany): \$1540.

FERRARI 250

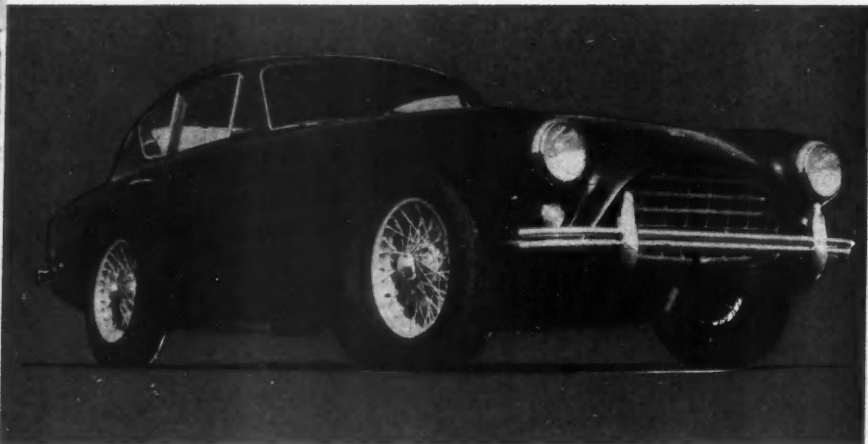


THE FERRARI 250 GT IS A CREDIT to the Italian motor industry. The car is known not only for its tremendous string of Gran Turismo victories, but also for its craftsmanship and beauty. The latest version sports a Farina body which, at first glance, looks like a scaled-down Continental Mark II. Closer examination reveals clean, uncluttered highlight lines, a minimum of chrome, and the shark-like Ferrari nose. Classified as grand touring coupes, the 250s clearly betray their racing ancestry, and can move into their maximum 130 to 150 mph in short order.

Beneath the Farina coachwork is a 3-liter, V-12 powerplant which, at an 8.5 to 1 compression, develops 240 bhp at 7000 rpm.

The Porsche-type four-speed gearbox has close ratio gearing, and operates like a hot knife through butter. The front suspension is independent, with coils and wishbones, and the rear employs semi-elliptic springing. The brakes are huge hydraulic units.

The overall performance of Mr. Ferrari's Gran Turismo cars is much more impressive than the all-out sportscars of only a few years ago. The 250s are offered in several body styles, from a super-light Scaglietti competition shell, to the swank highly-styled Farina version. Specifications: wheelbase 102 inches, overall length 175, width 66, height 54, front tread 53.2, rear 53, weight 2650 pounds. Price (port of entry): \$12,000.



a. c. aceca

ONE OF THE MOST SOUGHT-AFTER Gran Turismo machines is the trim, Italian-styled A.C. Aceca. From its time-tested two-liter Bristol powerplant, to its plush interior appointments, the Aceca fairly shouts quality. The aluminum bodies are handbuilt, hammered out on wooden dies. Only three are produced each week, and half the output is exported to the U.S.

With its four-wheel independent suspension, the car cruises effortlessly at high speeds. Specifications are: wheelbase 90 inches, overall length 162, width 61, height 52, tread 50, clearance 6, weight 1970 pounds. Price (port of entry): \$6599.

auto union 1000



AUTO UNION OF WEST GERMANY has introduced the DKW 1000 Sports Coupe for 1959. The two-seater is based on the chassis and suspension components of their very successful DKW sedan. Through the use of clever styling and two-tone color combinations, they have optically "stretched" the car's modest 92-inch wheelbase. The racy body lines combine the best of Ford's pre-'58 Thunderbird.

Power is furnished by the famous DKW 3-cylinder, two-stroker, with modifications. Capacity has been raised from 896 to 980cc (60 cubic inches), a dual-throat carburetor has been added, compression raised to 8:1, and a water pump and larger radiator installed. With

these modifications, the little two-banger works up a dependable 56 bhp at 4500 rpm. This increase from the stock 45-bhp version produces zero to 60 mph acceleration in 18.9 seconds, and a true top speed of 90 mph.

Much of the fame of the DKW engine has been gained by its dependability (only seven moving parts!) and economical operation. The hopped-up sports version still delivers an average fuel consumption of from 29 to 31 miles to the gallon. Specifications: wheelbase 92 inches, overall length 166, width 66, height 51, front tread 50, rear 53, weight 1980 pounds. Price (port of entry): \$3995.

STYLED ALONG THE LINES OF THE FLAMINIA, Lancia's Appia Series II coupe is a middle-range model in the Lancia line. With the Lancia tradition for fine, fast, roadholding machinery always at stake, the Appia coupe holds up its end admirably. The finish, inside and out, is hand-crafted, and polished to perfection. Upholstery, seating and instrumentation have been tastefully designed for comfort and ease of operation. Although the car is quite low, headroom is ample for six-footers. The dash has been sprayed with non-reflective finish, and is strikingly simple, with the instruments built into three large dials grouped beneath a glare-proof shroud.

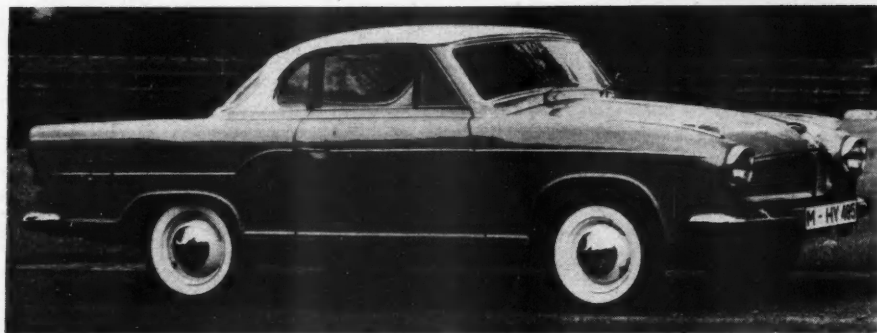
lancia appia



TURIN STYLE, WITH VOLKSWAGEN ECONOMY, seems to be the secret behind the little VW Gran Turismo coupe. A Concours car which will average 32 miles per gallon, cruise at a steady 70, and run for years without mechanical worry, is a rare find.

The Ghia-designed body is built by Karmann on a stock VW chassis, with a slightly wider platform frame, and stock VW engine. Performance is on a par with a stock VW, except for a six-mph gain in top speed, and better handling. Overall finish is excellent. The bucket seats are adjustable for rake and legroom. Behind them is a bench seat which can be folded forward for luggage space.

Weighing 120 pounds more than a VW sedan, with smoother body lines, and lower center of gravity, the Karmann-Ghia coupe is less susceptible to wind buffeting at highway speeds than the stock VW sedan. A new Karmann-Ghia convertible model has the same graceful body lines, and a tailored folding top. Specifications: wheelbase 94.5 inches, overall length 163, height 52.2, front tread 50.8, rear 49.2, weight 1760 pounds. Price (port of entry): coupe \$2445, convertible \$2725.



Goliath hansa TIGER

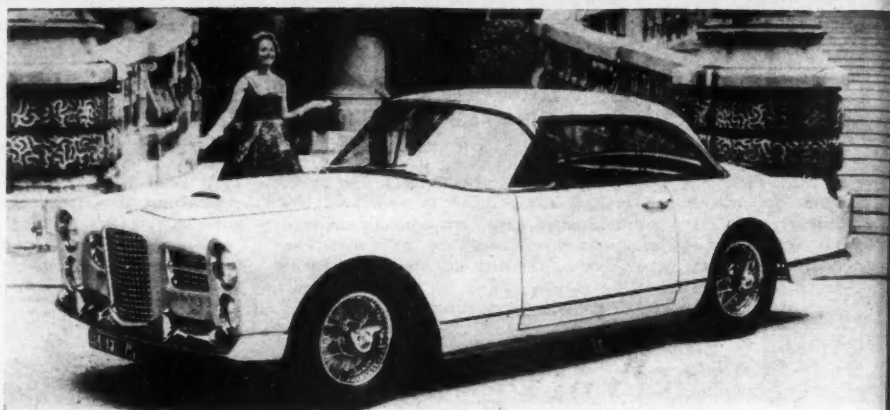
AGILITY TEMPERED WITH AUSTERITY seems to be the formula with Goliath's Hansa 1100 Tiger coupe. Austerity, in this case, is tinged with modern sedateness as expressed by the Borgward.

The overall quality of the coupe is well in keeping with its price tag of \$2835. The fully reclining bucket-type seats are upholstered in leather-grained plastic, and are definitely on the luxury side. Behind these is a bench-type occasional seat for children, or for luggage on cross country trips. The dash and controls are laid out for convenience and easy reading. Visibility is excellent, with expansive areas of glass and narrow pillars. Trunk space, for the

overall size of the car, is surprisingly large.

The Tiger engine is a hopped-up version of the standard sedan unit, developing a full 17-bhp increase over the stock 46-bhp mill. This lusty boost in the water-cooled, flat-four can be attributed to a slight increase in compression, and the use of two Solex carburetors instead of one. With these modifications, the car accelerates zero to 60 mph in 19.9 seconds, and has a top speed in the 90s. Specifications: wheelbase 89.3 inches, overall length 161.4, height 53.5, front tread 50.7, rear 49.2, weight 2090 pounds. Additional information on the Goliath line is on page 58.

facel vega



FACEL VEGA HAS JOINED THE POWER PARADE with the introduction of a 5.9-liter Chrysler V8 engine in their HK-500 sports coupe, and in the pillarless four-door "Excellence" limousine. This specially-built engine has a capacity of 5907cc (360 cubic inches), develops 360 bhp at 5200 rpm, and fires on a 10 to 1 compression ratio. The new HK-500 is said to be able to rip from a standing start to 60 mph in 7.5 seconds, and to 100 mph in 18 seconds. Depending upon final drive gearing (optional), the HK-500 has a rated top speed between 130 and 150 mph.

Facel Vega has enjoyed world-wide acclaim as France's finest and most glamorous automobile since its conception. Bodywork and trim,

both inside and out, are on a par with the world's finest. The chassis is fabricated from four-inch welded steel tubes, with coil springs and wishbones in front, and semi-elliptics at the rear. This system provides a smooth, soft ride, without bounce or wallow—yet smooth enough for high-speed cruising.

Specifications: wheelbase 104.7 inches, overall length 180, width 70.7, height 52, front tread 56, rear 57, road clearance 7, weight 3750 pounds. Price (port of entry): \$9650 for the HK-500. Standard equipment on the Facel Vega machines is the automatic transmission, power brakes, power windows, radio and heater. Optionals include Dunlop disc brakes, and air conditioning.

nardi

IN COMMON with the Abarth-Zagato, the Nardi-Vignale Sprint Coupe is based upon a Fiat 600 sedan chassis. The chassis is sent to Nardi, where the engine is reworked, and then to Vignale, where the Michelotti-designed body is built on the chassis. Unlike the Zagato bodywork, the Vignale shell is of steel instead of aluminum—an important point where the car is to be driven in U.S. traffic.

All-over finish is excellent, both inside and out. The interior features plenty of legroom, comfortable seating, grouped instruments which are hooded from reflections, and room behind the seats for a child to sit or for a considerable amount of luggage. Visibility is excellent, with wrap-around glass at the front and rear.

Horsepower has been raised from the stock 22 bhp, to a full 45.5 bhp at 6500 rpm.



Basic Nardi modifications consist of a stroked crank, high compression (9 to 1) head, larger valves with stiffer springs, intake manifold with enlarged ports, high compression pistons, hot camshaft, and complete balancing. Top speed is in the 95-mph range, with mileage ranging upwards from 30 mpg. The floor-

mounted shift lever is neatly placed, and operates a four-speed gearbox synchronized in the top three gears. Specifications: wheelbase 78.7 inches, overall length 154.5, width 55.1, height 45.7, front tread 45.3, rear 45.4, clearance 5.1, weight 1310 pounds (dry). Price (port of entry): \$3193.

D.B.

ONE OF THE RAREST GRAN TURISMO CARS seen in the U.S. is the tiny front-wheel-drive Deutsch-Bonnet touring coupe. The D.B. uses a modified Dyna Panhard twin-cylinder engine, and has a Fiberglass body. It has a fine reputation for class H and index of performance wins in international competition.

In photographs, this little class H machine looks much larger than its 85-inch wheelbase size. The body shell has a styling all its own, with a bullet-shaped nose and Italian-like cab. The roof area over the cockpit is transparent, imparting an air of elegance and openness lacking in most hardtops. Instrumentation has been laid out for high-speed motoring, with all units placed where they can be read at a glance. Interior space is surprisingly large, with room for two six-footers, considerable stowage space behind the seats, and four or five cubic feet of space in the trunk.

With a capacity of only 851cc (51.9 cubic inches), the coupe has a zero to 60 mph acceleration of about 20 seconds, and top speed in the high 90s. Fuel consumption is on the thrifty side, averaging 30-36 miles to the gallon. Specifications: overall length 160 inches, width 63, height 50, curb weight 1320 pounds. Price (port of entry): \$3595.



BUYING A NEW CAR?

"Before you sign on the dotted line..."

by William Carroll

I'M BUYING A CAR, was Gordon's greeting as I drove into his service station. "Bill, will you look at the order I signed yesterday?"

While I waited in the car, Gordon, who is my favorite lube jockey, ran to the office and came back with a Buyers Order and Invoice which sailed through the window as he disappeared behind a quarter panel to fill my Pontiac with gas. His order was a proper listing of car, model and accessories, but my bright buddy had signed the darn thing without a single price being listed. In a sense, he'd ordered a car without knowing the cost. "Gordon," I shout out the window, "come back a minute."

His head popped around the tail light. "What's the matter, Bill? Did I do something wrong?"

"Did you do something wrong? Nothing except order a car without knowing how much you're going to pay for it."

Gordon grins. "Oh, that's all right. The salesman is a nice guy. He's giving me a good price and didn't want to mark down any figures for fear it would get him in trouble with the factory." Just then the tank bubbled full and the pump shut off. Gordon capped the filler and steamed up front to clean my windshield.

"Okay, if you think so," I tell him. "How about a coffee break? We can sit for a couple of minutes and go over this paperwork."

ONCE IN THE PRIVACY OF A BOOTH, I hit him like a hungry trout leaping for careless water bugs. "Doggone it, don't ever let me catch you signing anything in blank! You wouldn't give me a signed blank check—would you?"

"Heck no," Gordon snaps. "Though you wouldn't get much."

"With a blank check I could only clean out your account. But a blank Buyers Order can become a legal note obligating you to pay many thousands of dollars. With it a dishonest salesman can

Illustration by Dick Fischer

latch onto your salary to pay for the most expensive car they sell."

"Wow, that was close!" Gordon breathed a sigh of relief as he grabbed for the paperwork.

"Wait a minute. Don't get eager until we've a chance to go over this item by item. There's a lot here you should know more about. When buying a car, new or used, most everyone knows the make, body style and engine size they want. And they can find a price tag on the window of every new car."

"I saw the price labels for the first time yesterday. Where do they come from, Bill?"

"From Washington, of all places. About a year ago the government investigated auto selling methods and discovered what is called the 'pack.' The car's price is 'packed' by adding money charges or increasing factory suggested prices. When a 'packing' dealer offered a larger trade-in or cash discount than anyone else, people thought it was a good deal. But it wasn't, because the car was priced higher than it should have been. Now there's a law requiring a price tag on all cars, filled in by the manufacturer and attached to the car at the factory."

"SOUNDS GREAT," SAYS GORDON. "But a dishonest operator could alter prices."

"Little chance. It's expensively illegal for anyone except the purchaser to remove a label. And you're the purchaser. So make sure any new car you buy has one. No label, and it's a used car—no matter what the salesman says."

"Does the label list anything more than price?" Gordon asks.

"Sure does. It tells how the car was shipped and to which dealer. If it's not being sold by the dealer whose name is on the label, you have a pretty good right to know how come. Anyhow, let's take first things first—the price of the car. Under **SELLING**



"Before you sign on the dotted line..."

continued

PRICE or CASH DELIVERED PRICE on the Buyers Order should be listed the cost of the car as shown on the label on the car you're buying. Included in this figure are transportation charges, excise taxes and preparation costs."

"This I understand," Gordon decides. "Does the labeling law mean that they can't make any price changes?"

"They sure can. Most dealers are busy as ever selling cars on a price basis. They know, as a result of a survey made by the Ford Motor Co., that most cars are sold on the basis of price and availability. Accordingly, when you sit down and seriously begin doing business you can expect moderate price concessions. But don't be a chump and expect \$500 discount off the cheapest two-door. There's not half that in the car. A dealer can also give an over-allowance on your trade, in place of a discount. In a sense, he's sharing with you the profits on a new car. So if you have time, there's still a lot of sense in shopping around to find a good deal.

"You know," I continue, "here's an idea that might help. Buy each of the Sunday papers for a couple of weeks before going out to buy a new car. From used car advertisements make a list of the selling prices of the car you plan on trading. Add ten per cent to these prices because they usually advertise their cheapest car."

"THAT SEEMS LIKE A LOT OF TROUBLE," Gordon reminds me. "Aren't there Red, Green or Blue Books containing used car prices?"

"Yes, but price books are averaged from hundreds of used car sales. Your car is clean enough, if I remember correctly, to be worth more than the average. Then too, the price of your make and model may be higher in this city than elsewhere. Be fair in evaluating your car, then stick to the figure. Keep in mind that a dealer can, and often will, add a few dollars to close a deal when you're buying something he has on the floor."

"ONCE YOU GET THIS FAR," I go on, "it's time to be concerned with how you're going to pay for it. Lots of wild deals—such as 'No Down Payment,' 'Low Down' or 'An Honest Face'—are supposed to deliver you a car. Most are advertising gimmicks pulling you into showrooms so salesmen can sell the works. Sure as shooting, any deal calling for less than the 25 per cent most finance companies want is going to cost you in the long run.

"Sure, they'll sell a car with no money down—if you have excellent credit, or are willing to mortgage a house or furniture. Or you can trot downtown to a small loan outfit and borrow money to complete the required down payment. If you have to buy a car this way, you're better off walking. 'Low Down' deals cost like the devil because the less money you pay down, the larger your remaining balance, the bigger the payments and greater percentage of each dollar that goes for interest and not for car.

"A good adviser on financing is your neighborhood bank manager. Even if you've never talked with him before, buying a car is an excuse to learn his name. He'll have some pretty good advice on car financing, and you'll be surprised how impartial he can be when it comes to discussing the difference between bank and auto company loans.

"RIGHT DOWN HERE IS 'UNPAID BALANCE,' which is the part you finance. Banks may pick it up for 4½ or five per cent. Dealers charge from six to eight per cent, but the moment you slip into a shaky credit classification, where you're making a tiny down, or are a poor risk, the finance rate goes up as high as the law allows. Sometimes higher."

"Why is that?" Gordon wants to know. "Money should cost the same whether you make a big or little down payment."

"Not quite. You see, the finance company is gambling on you. Their interest rates are betting odds. If you have good credit, and are making a fair down payment, odds are in their favor you will pay for the car as agreed. They can give you a low interest rate. On the other hand, if you're what's known as a 'flake' and buy a car you can't afford for a nickel down and a dollar a week, odds are against the finance company that you'll ever finish paying for it. The risk of trusting you is greater and they'll charge a high interest rate to make sure they're not caught short if a repossession is necessary. Then there are buyers who go for the 36- and 48-month

contracts, never realizing that at no time do they own enough of the car to give it away."

Gordon sipped his cooling coffee and searched my face for a clue. "What do you mean—they can't afford to give it away?"

"It's unfortunate," I say, "but lots of people in this city right now owe more money on a car than the car is worth. They couldn't give it away because anyone can buy it for less from a used car dealer. For the life of the contract, they'll have to pay and pay and pay for a 'No Down Payment' deal in which the car is depreciating faster than payments are being made."

"I GUESS I'M LUCKY," Gordon says. "Besides, I've always paid for stuff on time. Tell me, Bill; there's a lot of fine print here—must be 20 lines of it. A quick run-through gives me the idea . . . they're going to sell me a car and I'm going to pay for it. Is there anything here I should change?"

"Don't bother to spin a wheel," is the best advice I can give. "An attorney spent years finding the least number of words that bind you the tightest. You might just as well relax, for as I told you, the moment you sign a Buyers Order, pass over a few bucks and accept a receipt, you've ordered a car. As it plainly says in the fine print, the dealer can retain the advance deposit as payment for expenses of reservation, demonstration and preparation."

"That's money down the drain, isn't it, Bill—if I don't close the deal? The moment I sign a Buyers Order and give it to the dealer, I have to take the car . . . even if I change my mind?"

"It sounds that way, Gordon. However if you give the dealer no money and don't drive the car, there's not much of a contract. Of course if you ordered a special car and the dealer went to considerable expense to get it for you, he would have a right to expect you to buy it. On the other hand, the moment you drive the car listed on your Buyers Order, you have, in a manner of speaking, accepted delivery. Even if all you did was to drive it around the block, the car is yours. So are the payments."

"I didn't give them any money on this order," Gordon says. "Didn't have any with me. And I only drove a demonstrator."

THEN HIS FACE BRIGHTENED as his fancy slipped overseas. "What about the imports, Bill? Is it any easier to buy them?"

"Not much. Most imported car dealers use similar forms, live under the same State regulations. The thing with an import that bears watching is the matter of service and parts. Make sure the dealer has good service facilities, adequate tools and factory parts."

Gordon finished his coffee and began checking off remaining items on the Buyers Order. "Bill, we didn't figure anything for insurance. That's listed here."

"You've three places for insurance—your own agent, the car dealer or one of the finance company's own agencies. Insurance rates vary as do car prices, so it's well worth your while to telephone-shop for insurance in the same way I hope you're going to shop a couple dealers to get the best price for your trade, and quickest delivery of the car you want. It costs no more, in depreciation, to drive a car for eight months than it will cost to drive it two. Quick delivery is usually worth \$25 over waiting a month or six weeks."

WE'RE WALKING BACK TO THE STATION by now, and I can see Gordon is doing some heavy thinking. He slowly tears up the Buyers Order form we had just picked apart. Suddenly I remember something else. "Gordon, there's one item I forgot to mention that I believe is mighty important. When you get any new car, there's an instruction book with a warranty slip issued by the factory. Make sure you get them both. The warranty is the maker's contract with you, or the dealer, for taking care of your new car. Once you know what's in the guarantee, if something goes wrong you're well clue'd as to whether they'll fix it for nothing, pay part of the cost or let you pay for it yourself. If there's anything I tell you that should make sense, it's to read the warranty policy."

All at once three cars hit the island and Gordon double-timed off to clean a few more acres of glass. Several weeks later I stopped by. Gordon winked and pointed to a new convertible parked in the lube area. "I followed your advice, took my time—and shopped. Easiest \$300 I ever made."

THERE'S NOTHING NEW about using engine-driven "servomechanisms" in an automobile to relieve the driver and passengers of various forms of physical exertion. These aids have been very attractive sales gimmicks—certainly in keeping with the modern pushbutton trend in American daily living.

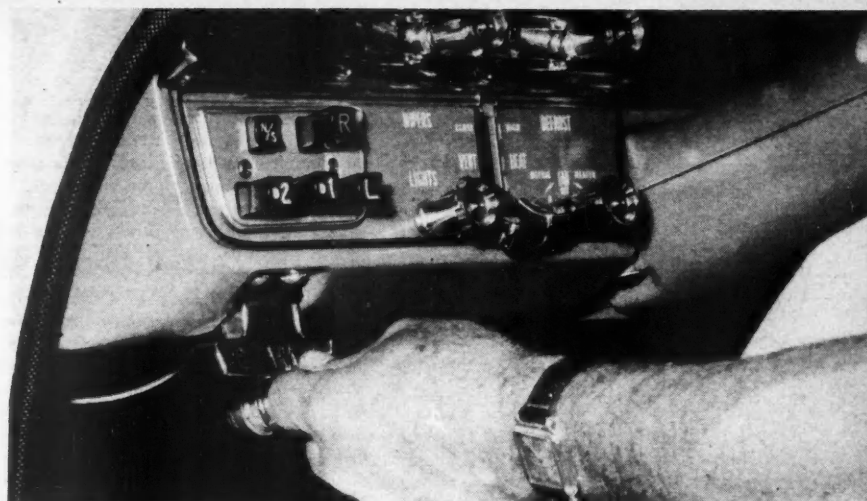
It's been coming for years. The patent file on power steering mechanisms runs clear back to the early 1900s. C. W. Neiman, a Bethlehem Steel engineer, demonstrated a crude shaft-driven mechanical affair at the 1927 SAE summer meeting. As far back as the early '30s a number of American production cars had vacuum-boosted brakes and clutches. Automatic transmissions and power-shifting mechanisms began to appear in the mid-'30s. Chrysler came out with a vacuum-operated convertible top in '39. Hydraulic window lifts and seat mechanisms were widely used in the late '40s (introduced before the war). Chrysler showed the new Gemmer HydraGuide power steering in '51.

And so we progressed . . . but where to?

Today the pushbutton fad has Detroit engineers running in circles. There seem to be a hundred little jobs here and there on a car that you can do with auxiliary power—and we're apparently biting them off one by one without any plan for an eventual centralized power source. Take a current Oldsmobile that's loaded with all the gadgets, for instance. We have an electric motor in each door to raise and lower the windows. There's a motor under the front seat to move it back and forth (Mercurys and Lincolns feature *two* motors, to raise and lower as well as move back and forth). If the car is a convertible, there'll be an integral electric motor and hydraulic pump unit, operating hydraulic cylinders to raise and lower the top. We'll have a big vacuum booster unit for the brakes. Our power steering pump will be belt-driven from the crankshaft pulley. If the car has air suspension we'll have a compressor belt-driven from the crank. Air conditioning would require still another type of belt-driven compressor.

We can end up with quite a bundle—maybe as many as six electric motors, two oil pumps, two compressors, and a vacuum booster unit! There's bound to be unnecessary bulk, weight, power drag on the engine, cost, and service complexity in this package. And there's just *got* to be an easier way to do these jobs.

IN THE FIRST PLACE, the trend in power accessories on American passenger cars has been marked by no well-defined trends. We've been adding power accessories as demand and inspiration arose, usually adopting a separate power source with each gimmick—dictated by cost and space. For example, early postwar power-seat and -window mechanisms utilized hydraulic cylinders for the actuation, fed by an internal gear-type oil pump powered by an electric motor. The motor-pump



The Cost of Pushbutton Driving

by Dean Parker

unit was generally located in the engine compartment. As the popularity of this equipment grew it was soon obvious that the hydraulic layout was too costly and complicated for the mass market. It was felt that four or five small electric motors were actually cheaper and more reliable than one large motor, oil pump, reservoir, four or five hydraulic cylinders and plumbing. (The motor turns a screw-jack arrangement or some kind of gear sector and rack, thus converting high-speed rotary motion into slow linear motion.)

On the other hand, the trend in power-operated convertible top mechanisms has been the other way. Electric motor-driven mechanisms had replaced the original vacuum deal by 1942; but the trend now is to do the job with hydraulic cylinders, fed by an integral motor-pump-reservoir unit in the trunk. The hydraulic system is cheaper in this case. But then you wonder why it wouldn't be practical to use this basic hydraulic pressure system to also operate windows and seats in a convertible, as long as it's there anyway. The answer, of course, lies in the limited production of convertibles and the high cost of parts in low quantity. It's cheaper to use the sedan window and seat mechanisms . . . but it's just another example of the need for a whole new look at this power accessory problem.

HYDRAULIC POWER has been dominant for boosting car steering since the beginning. It's smooth, powerful, and relatively inexpensive. Borg-Warner tried to break in with a weird mechanical deal in 1953. The power was fed in by a belt-driven shaft from the engine, applied to the steering arm by engaging and disengaging multi-plate friction clutches! It looked good on paper, but turned out to cost

more than hydraulic power, caused more engine drag, and wasn't as smooth. Studebaker used a few of them, then went back to the Saginaw hydraulic gear. Otherwise the trend in hydraulic power steering has been toward more integration—that is, building the power mechanism as a compact unit with the steering gear itself. Many earlier layouts (and some current low-priced ones) used the regular manual gear, with the hydraulic booster cylinder hooked into the steering linkage under the car—obviously a quick effort to meet a quick demand with a minimum of tooling changes.

Today we try to save money and space by putting everything right on the end of the steering column in a compact casing. The toughest space problem with power steering is still that separate oil pump that has to be driven by the crankshaft. Chevrolet saves space by mounting the pump on the rear of the generator; but this subjects it to excessive rpm. So they have to put ball bearings in the generator and spend more money on the pump itself. This setup also draws more power from the engine.

The advent of air conditioning and air suspension has caused new headaches. Each requires a separate compressor, and pressure requirements are enough so that we're just about forced to use the bulky, power-consuming piston-type compressor. These can pull up to 10 horsepower off the engine at high speed. Cadillac uses a husky electric motor to operate their suspension compressor, but this is a little swanky for the bread-and-butter boys. So, this means another belt drive off that poor old crankshaft pulley . . . and more problems of space, cost, and power drag. On some cars they arrange to shut off the compressors when they're not needed by putting a mag-

PUSHBUTTON DRIVING

continued

netic clutch between the belt pulley and compressor crankshaft. This *really* kicks the cost up—but probably pays for itself in a few months in gasoline savings.

CERTAINLY THIS MATTER of power drag on the engine is one of the toughest aspects of the whole accessory problem. It's actually getting to the point now where the engineers have got to plan on building anywhere from 30 to 50 per cent more horsepower into a new engine than is actually needed to move the car. This means a bigger, heavier, more expensive engine—and one that isn't about to go very far on a gallon of gas. The salesman may tell you that these little accessory power drains couldn't possibly make a big 250-hp engine breathe any harder. Don't you believe it—and here's why.

The overall average speed of a car (running about 10,000 miles a year, in city and country driving) has been figured to be somewhere between 30 and 35 mph. The engine power required to move the car at this speed is about 10 hp. Thus if you were to add to this the eight or 10 hp needed to drive accessories, your gas mileage could drop to half of what you could get without them—that is, when the engine has to produce only 10 hp to propel the car.

Let's take a hypothetical example of driving at highway speeds: A car traveling 60 mph on a level road requires about 35 hp at the clutch to pull it along. If this were all the power the engine had to develop you'd get maybe 16 miles on a gallon of gas (assuming the engine is turning over at 2400 rpm). But then we start adding for accessories. The generator will want about .7 hp if it's not charging; if we just pushed a button to roll up a window with a motor, and the generator is charging heavy, it'll soak up about 1.4 horses. Our power steering pump will take another .8 hp. If we've got air conditioning turned on, the compressor will absorb a whopping 5.5 hp. The big fan needed to cool the condenser when the car is idling in traffic (though it's just along for the ride at 60 mph) will take about 1.6 hp. If we have air suspension that compressor will want five hp.

Accessories like these can easily drain a total of 14 hp off the crankshaft at 2400 rpm. And the engine is not just putting out 35 hp to push the car—but actually $35 + 14 = 49$ hp to push the car and operate the accessories. Maybe this won't make a 250-hp engine sweat . . . but it can whack off five or six mpg just like that. Furthermore, these same accessories that pull 14 hp at 2400 rpm will want close to 30 hp when the engine is winding up 4000 rpm in the kickdown gear. (Some

makers have measured up to 40 hp in accessory losses at high rpms.) Obviously this doesn't do a thing for car acceleration in the passing ranges on the highway.

No, we *pay* for the convenience and gadget appeal of pushbutton driving in several ways.

SO WHAT TO DO about it? Certainly the answer (if there really is one) lies in the direction of the *central* power system. The principle here is to use a single form of power actuation—either hydraulic, pneumatic or electrical—for *all* the major accessories; then have just one big pump or generator driven by the engine. Proponents of this principle claim we can radically reduce space problems, power drain, service complexity, and even costs. Actually, the central power system for car accessories has been a topic of pipedream bull sessions around the Motor City for at least five years.

Some readers will recall that the Pesco division of Borg-Warner made quite a stir with a prototype central hydraulic system they developed in 1954. They had a husky vane-type rotary oil pump, belt-driven from the crankshaft, developing up to 1200 pounds pressure. Then they had various types of cylinder actuators and rotary hydraulic "motors" to operate the engine fan, generator, brakes, steering, seats and windows, and even the windshield wipers! It was a very neat and compact layout. It actually saved gas, too, because special load-sensitive restrictor valves were provided on the fan, generator, and power steering motors to hold rpm down to just the output needed to do the job.

Unfortunately, maybe, nothing ever came of the Pesco system. It was too much money for Detroit at that time, and too much had already been invested by the big manufacturers in tooling for power steering pumps, window motors, brake vacuum cylinders, etc. The stuff is gathering dust in the Pesco experimental shops in Bedford, Ohio right now! Meanwhile one can't help but wonder what a central hydraulic system could do for a car such as the Ford retractable hardtop that uses no less than seven separate electric motors just to raise and lower the top—not to mention the five for the seat and windows!

ALL OF WHICH brings us to the fabulous Citroën DS-19. Here is a French production car, introduced in 1955, that actually employs a genuine central hydraulic system. (And, incidentally, the car itself is generally reputed to be the most advanced production design in the world today. You'll find several of them on Detroit test tracks, being combed by the slide rule boys for ideas they can use on their 1965 models!) Central hydraulic power is doubly practical for this car because of the air-oil springs used for the suspension medium. Here the road wheel moving up and down is linked to a piston in an oil cylinder that is, in turn, balanced against a

closed chamber of inert gas through a flexible diaphragm. It's the same principle as air suspension, except there is a column of oil between the wheel piston and gas chamber. Thus body leveling can be done by merely pumping oil in or out of the cylinder—and the shock absorber can be built right into the cylinder, too.

As long as Citroën was using a high-pressure oil pump for the springs, it was practical to go ahead and operate other controls with this hydraulic pressure. For instance, when you move the gearshift lever to the next slot a servo system disengages the clutch, shifts the gears, and engages the clutch again. The clutch is disengaged automatically when the car is stopped. Oil pressure also applies the brakes (through a small foot button on the floor), and does the steering. There has been no attempt to operate generator, fan, windshield wipers, etc. hydraulically—but this would be a logical future development. The whole deal is definitely a brilliantly-conceived system, and one that history may record as a great milestone in automotive development.

WHEN WE THINK of central power systems in terms of Detroit, we'll have to look at the *pneumatic* principle carefully, of course, because of the late trend to air suspension. That is, we need an air compressor for the springs anyway, so it might be practical to make it a little huskier and use the air pressure to do some of the jobs that oil pressure is now doing for steering, seat and top mechanisms. There should be no insurmountable problems with central pneumatic systems, either—except that piston-type compressors require relatively more horsepower to drive (for the amount of work available) than a rotary oil pump. New compressor developments are gradually solving this. We're certainly not short of know-how on pneumatic actuation devices. Trucks have used air brakes for years. The auto industry has had a lot of experience with manifold vacuum devices. And Bendix-Westinghouse offered air steering systems for trucks 25 years ago!

Some engineers have talked about central power through *electrical* devices—solenoids, reversible motors, and magnetic elements. No practical production systems have yet been developed, but it's interesting to speculate. Certainly any such system should be extremely compact and trouble-free—though it might cost a lot. At any rate, it's a cinch that Detroit is going to have to do some fancy brain-busting on this problem of power accessories in the next few years. The present trend is getting out of hand cost-wise, space-wise, and service-wise. We need an entirely new concept. There's just going to be no place on tomorrow's light, sleek highway cruiser for a couple of large compressors, generator, a big vacuum unit, two or three oil pumps, two or three tanks—and 14 electric motors!

/MT

What's REALLY New



for '59?

by Charles Narpel

Our Technical Editor takes you behind the wheel and around the new models—and evaluates the significance of Detroit's latest engineering features.

NOW THAT THE INITIAL FLURRY of "Oh's!" and "Ah's!" over 1959 cars has subsided to comparing chrome strips, interior fabrics, bumpers, paint colors and other easily distinguished style changes, it's time to see what other improvements, if any, are hidden from view in the mechanical departments under those shiny new bodies. Minor mechanical changes usually take place during a year's production run, most often on items that the best road tester in the world—the customer—has proven to be inadequate. Engineering departments may accept these production line solutions or

completely redesign the faulty piece during the new model retooling period. In addition, they are constantly researching against the day when weights, speeds and costs force them into something entirely new.

BEFORE WE VERBALLY LIFT THE BODY from the chassis and expose some of the pure mechanical improvements for 1959, it is only proper that new aids to driver comfort be reviewed. With the trend toward lower chassis, bodies and rooflines, it was just a question of time until some special method of

What's REALLY New for '59?

continued

entering and leaving the front seats had to be devised. While others may be speculating or creating "dream cars" with this feature, Plymouth and the entire Chrysler line are offering one of the most convenient, easy-to-use interior features that has appeared on stock cars in a long time — swivel seats. Mechanically, they are ruggedly simple. Nylon bearings, that require no maintenance and resist wear, support the swivel operation that locks in driving position. A flick of the generous latch allows body movement to swing the seat outward for alighting. It is spring loaded so it rotates under its own power when unlatched for entering.

With the door fully open, entering or leaving the car is like getting up from a chair. In parking areas where door swing may be limited by the car in the next stall, the advantages of swivel seats really show up. No clothes-twisting, knee-banging operation under these conditions. Any disadvantage? Yes . . . but it can be put to a very convenient

advantage. The seat must be returned to driving position before the door can be closed. If this is done carefully, so as not to lock it in the driving position, it will spring outward when the door is re-opened, eliminating the necessity of unlatching it to enter.

Electronics, rather slow in automotive applications since the automatic headlight dipper, has made possible a practical rear-view mirror, again a first for Chrysler Corp. cars. Behind a mirror of standard size, a small photocell actuates a relay, causing the mirror to pivot the rays of following headlights out of the driver's eyes as soon as the photocell is energized by blinding rays.

Mercury combined a few mechanical principles when they developed their new warning-light speedometer. A dial sets the speedometer indicator at a pre-selected speed. As long as the car is below this speed the speedometer face glows green. When the pre-selected speed is reached or exceeded, the dial glows red, giving the driver an almost subconscious indication of his speed.

COMFORT BEGINS AT THE ROAD WHEELS and ends at the base of your spine, but the line to achieve this is far from straight. Suspension alone is not the answer, as one very necessary factor — handling — rears its head in protest against mushy springing. Plymouth, whose torsion bar front suspension made a good-riding, well-handling car of previous models, has further improved this type of springing to where it is even better than 1958. Shorter bars, with different spring rate characteristics, allow firmer cornering while maintaining all the comforts of softer suspensions. Cam-type A-arm mountings make wheel alignment a simple chore. The torsion bar ends have adjusting screws for leveling.

While Plymouth has been developing one of the best front suspensions available, Chevrolet has done many things to improve their rear suspension. Complete isolation of the components of Chevrolet's rear end — coil springs for springing only, trailing arms for alignment, track rod to control body lean, and traction arm to prevent axle wind-up — has resulted in a very stable but comfortable rear suspension.

Closely allied with suspension and handling are shock absorbers. No matter how smooth the road or how well balanced the tire, the wheel is constantly vibrating at a very high frequency, transmitting this motion through the suspension to the shocks. The shock absorber piston moves in

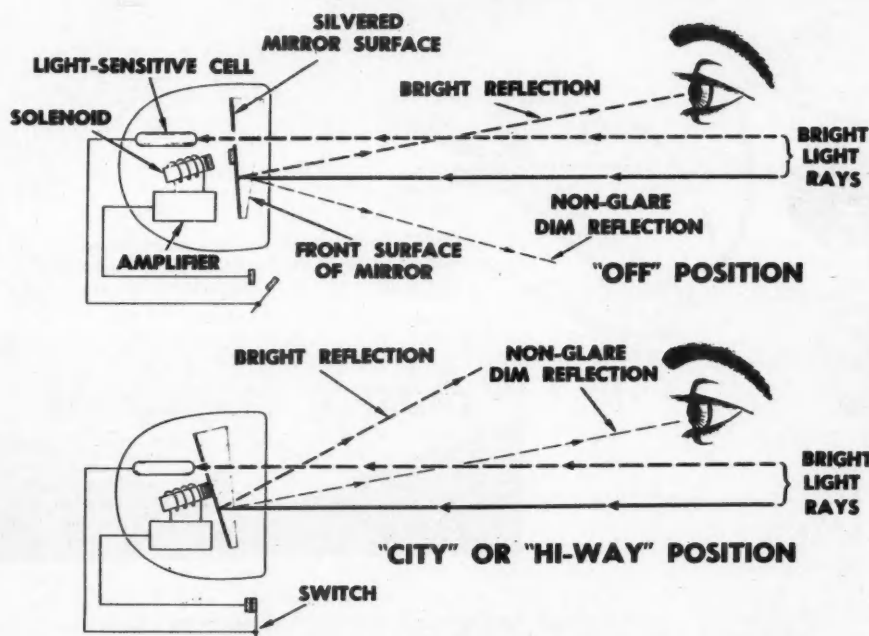
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Chrysler's swivel seat, if left in unlocked position, moves outward under its spring loading as door opens.

driver conveniences

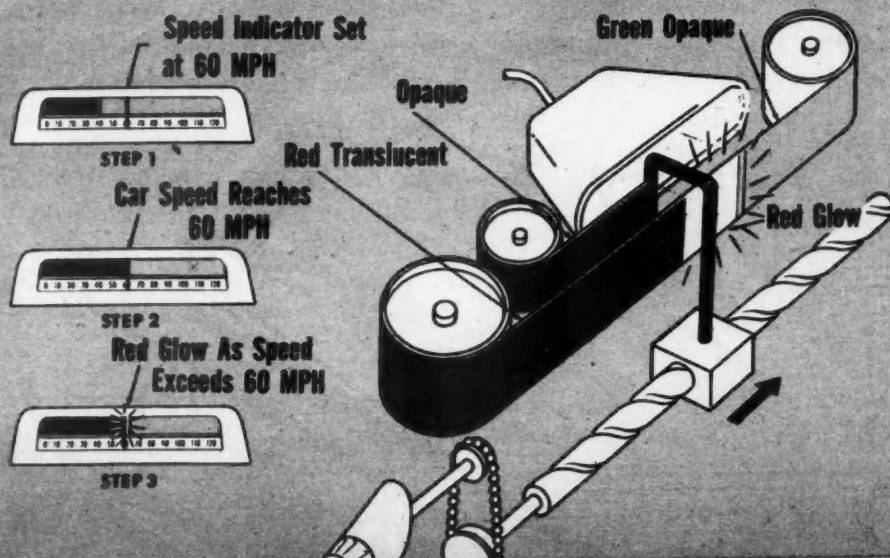
Photocell and relay in standard size mirror housing provide electronically controlled tilting action.



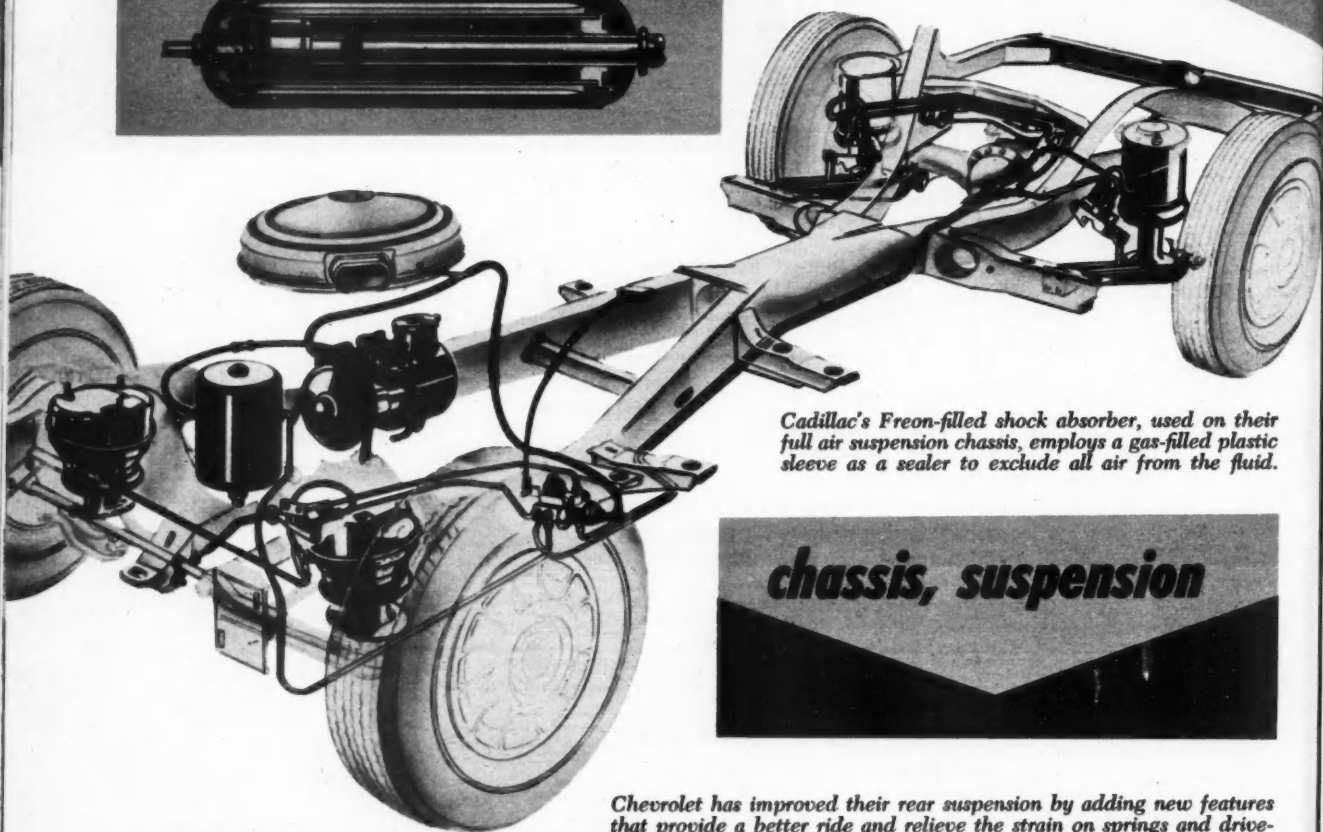
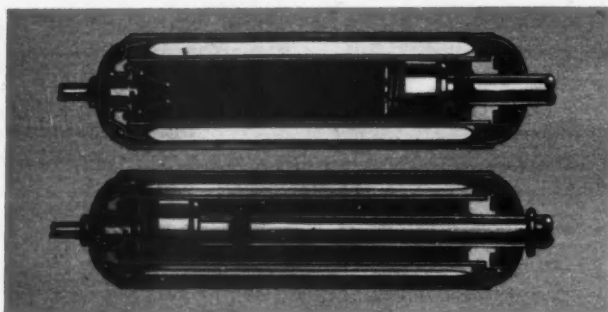
Schematic drawing shows how light path of high beams striking the photocell diverts rays away from driver's eyes. Dash control allows sensitivity to be adjusted so mirror is not affected by street or overhead lights.

MIRROR-MATIC ELECTRONIC REAR VIEW MIRROR

Color-changing band on Mercury speedometer indicates when pre-set speed is exceeded. Small dash- or column-mounted control is linked to worm-driven indicator needle.



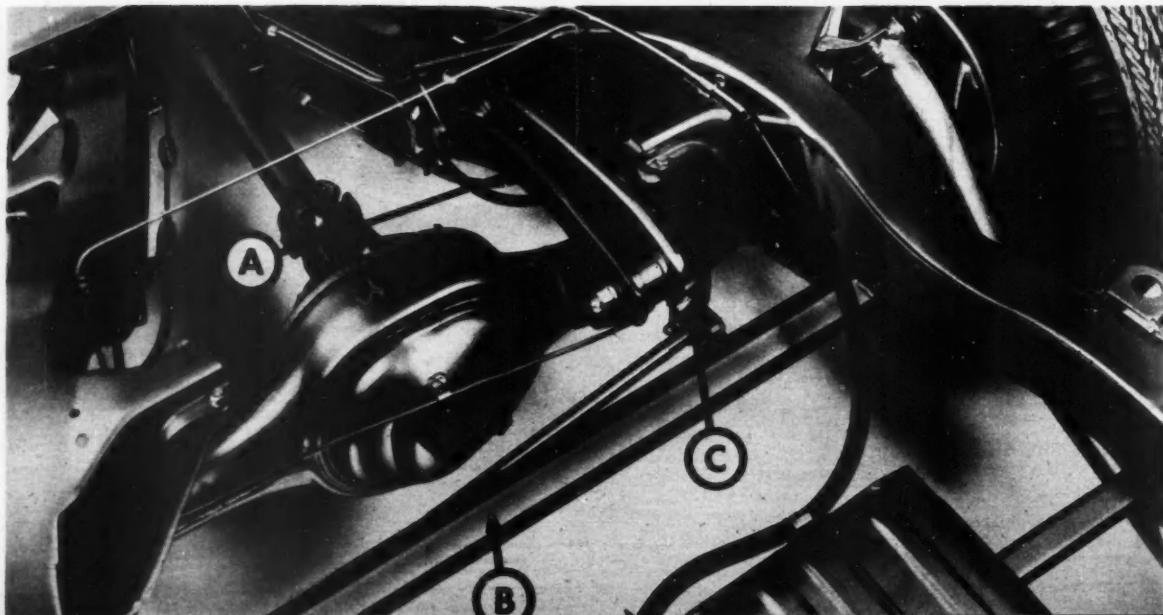
What's REALLY New for '59?



Cadillac's Freon-filled shock absorber, used on their full air suspension chassis, employs a gas-filled plastic sleeve as a sealer to exclude all air from the fluid.

chassis, suspension

Chevrolet has improved their rear suspension by adding new features that provide a better ride and relieve the strain on springs and drive-train. (A) anti-twist arm, (B) extra crossmember, (C) anti-sway bar.



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Pontiac's wider track puts suspension points closer to side overhang, improves handling.

the hydraulic fluid faster than the best food blender ever made. Small amounts of air present in conventional shocks are whipped into the fluid, reducing its density and efficiency. Cadillac engineers, working to produce an airless shock absorber, developed a captive air system, wherein all the air in the hydraulic chamber is replaced with Freon gas which is held in a plastic bag.

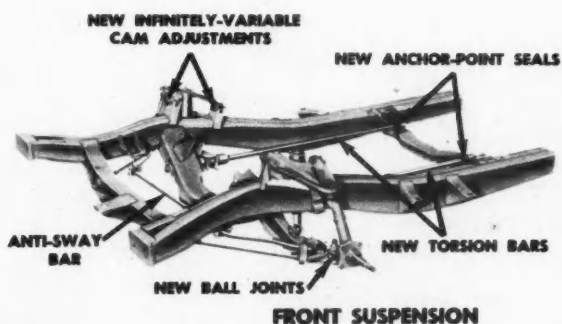
WIDER INTERIORS, AND NATURALLY WIDER BODIES and frames, have produced a situation of weighted side overhang that increases body lean, especially under full loads and fast cornering. A wider base for a wider upper structure is Pontiac's purpose in increasing tread on its 1959 models. Increases of a full five inches in the front and 4½ inches in the rear provide a better supported chassis. The contact points with the ground being closer to the outer limits of the body and chassis give a squatting effect that enables improved handling characteristics. Increasing track width effectively lowers the center of weight, providing a greater safety "roll-over" factor. A test car driven by MOTOR TREND handled extremely well, especially on roily surfaces where the low

ratio between wheelbase and track gave the car a tendency to proceed in a straight line instead of weaving slightly as one, then the other front wheel dropped into the shallow troughs of the test course. Parking was no different from narrower track cars, and parallel parking with high curbs was simple as the wheels touched the curbing sooner, giving earlier warning that the body overhang might scrape.

BRAKES, SUBJECT TO MUCH CRITICISM, have been under research for some years with minor improvements, mostly in lining, but with some real changes showing up this year. Chevrolet, aware of the increased pressure possible with power-assisted brakes, has increased lining area and improved heat dissipation with a flanged drum and slotted wheels to facilitate steering the under-car air past the drums. Oldsmobile went Chevrolet one better by using an even larger flange and more lining area than last year. Buick had great success with finned drums, aluminum for the front, steel for the rear. Unless aluminum has a close molecular bond with the steel liner, it does not dissipate heat very well. An improved method of securing this bond is used on Buick's 1959 aluminum drums. All of the American manufacturers have taken advantage of the new heavy-duty brake fluid which operates at a much higher heat range and allows further braking power by better withstanding increased wheel cylinder heat and pressure.

Steering has changed radically over the past several years due to the universal adoption of power units. Oldsmobile, like many others, has had this feature but spent much time and money improving it. Heart of any power unit is its valving — i.e., the control of hydraulic pressure that moves the wheels. Oldsmobile engineers felt that they had reached the limit of sensitivity with sliding valves, so they developed a rotary system for fluid pressure control that has practically no lost motion and compensates automatically for wear within the unit. Steering wheel control has negligible linkage loss and steering is sensitive and positive.

UNDER THOSE SPACIOUS 1959 HOODS nestle some of the most powerful engines ever put into production family cars. Horsepower costs money, for no matter how you put it, the only way to more of it is to burn more fuel. Naturally there are



Plymouth's shorter torsion bars have different spring rate that gives improved handling without sacrificing ride comfort. Set-screw adjustment on bar ends provides for chassis leveling, and cam-mounted suspension cuts alignment costs.

What's REALLY New for '59?

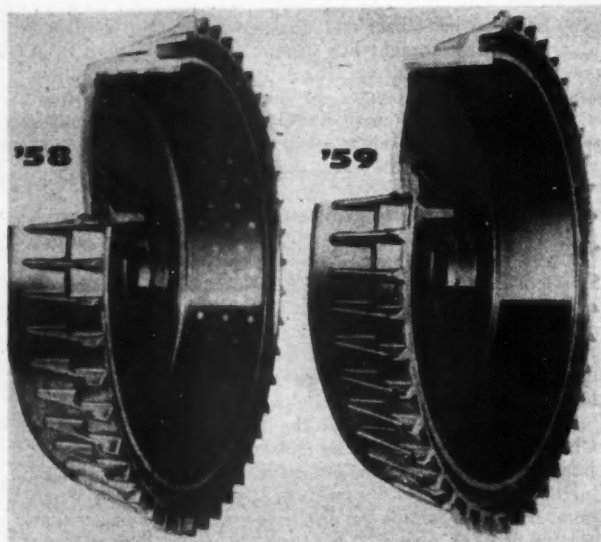
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efficient ways to burn fuel and some downright wasteful methods. Combustion chamber shape, breathing, exhaust restrictions, carburetion, cam characteristics, ignition, displacement and compression ratio are all contributors to the power per pound of fuel consumed. The most efficient use of low-cost fuel has always been the ultimate in passenger car engine design, but too often a demanding consumer will forget that the high-performance engine he seldom uses to advantage gives him rather poor mileage.

Buick, realizing that only a small percentage of their customers had taken advantage of previously offered super-type engines, designed a new powerplant for 1959, incorporating some well-proven engine principles in an effort to provide

adequate performance with low stress and consequently longer life, and reasonable gas consumption per horsepower output. A new cam, which cut valve overlap almost in half, keeps most of the fuel charge in the combustion chamber, instead of losing some of it due to both valves being open for a comparatively long interval. Engines with cams of this type are real chuggers at low speed but fall off at higher rpms. Taking advantage of greater low-speed torque, they used higher gear ratios, and to offset possible power losses at high speed, they increased engine displacement. Using bigger engines and higher gear ratios, they were able to hit a happy performance medium with increased fuel economy at more frequently used lower speeds, and adequate per-

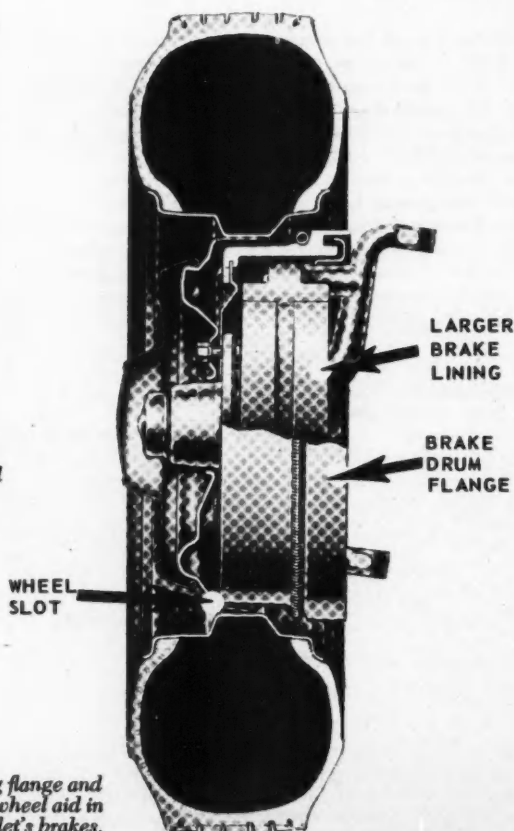
brakes, steering, transmission



Buick's new process for bonding aluminum brake drum to steel liner improves heat transfer, provides a better surface and more liner contact area.



Large aircoop flanges on Oldsmobile drums steer cooling air past brakes and increase heat dispersion.

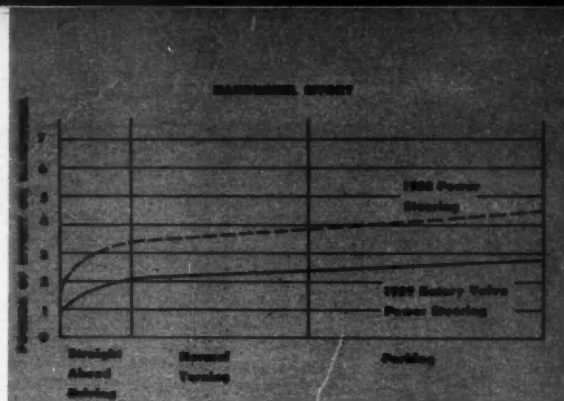
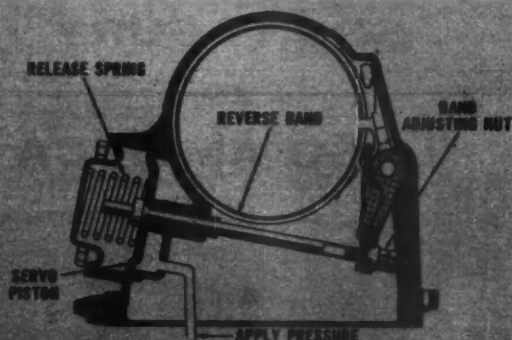


Heat-dispersing flange and slotted wheel aid in cooling Chevrolet's brakes.

formance with reasonable fuel consumption at high speeds.

Ford was able to do much the same thing with their existing engines by lowering compression ratios to accommodate regular fuel and thereby reduce costs by as much as five cents per gallon. Performance in the most-used speed ranges has suffered little with this change as cams and gear ratios have been altered to compensate for such so-called "de-tuning."

Torque converters, fluid drives and automatic transmissions have proven their worth and reliability over the long haul of constant development, and Ford, certainly pioneers in band-type transmissions (Model T), are producing a two-speed automatic of their own design. Servo-operated bands — one for low and one for reverse — combine with a multi-disc clutch for direct drive, in a lightweight, low-cost, aluminum-cased two-speed transmission. Shifting points and rear-end gear ratios are such that one hardly misses the extra gear. Fewer moving parts, by more than 100, should contribute

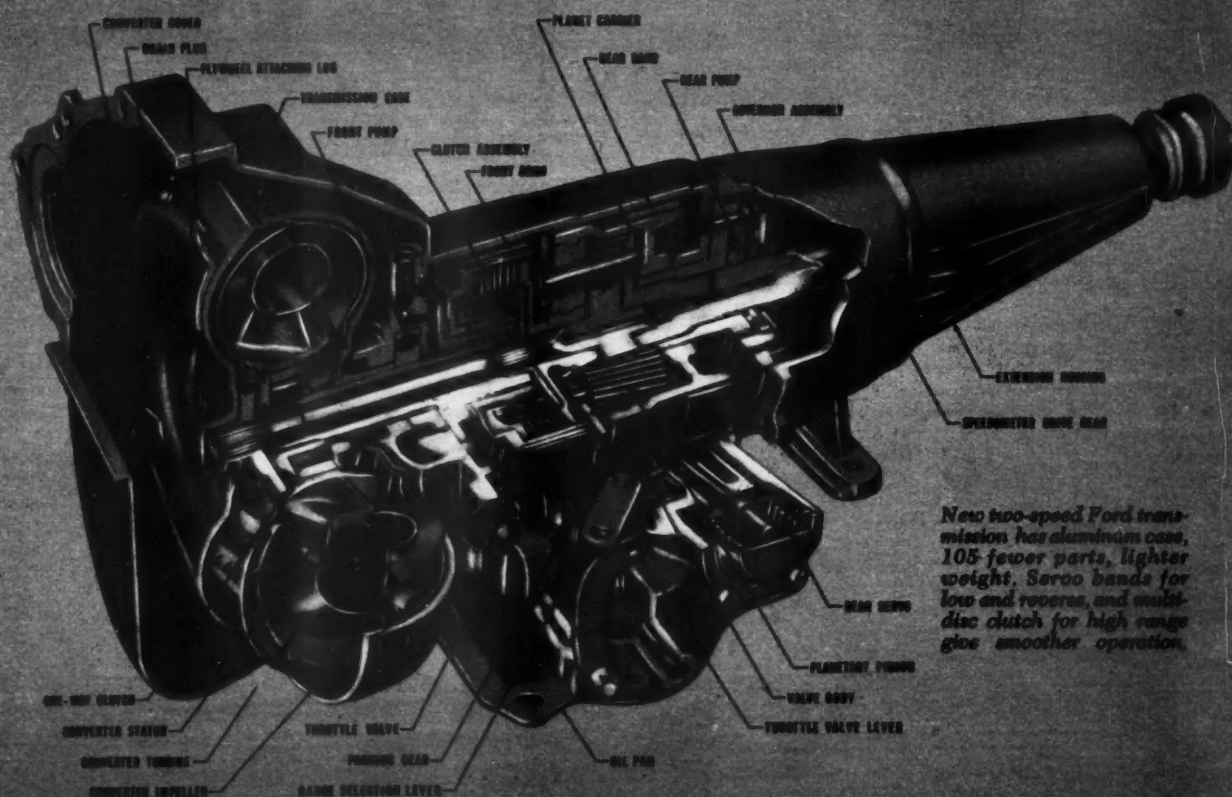


Rotary valve power steering unit developed by Oldsmobile is an improvement over sliding valve controls. Better linkage and self-adjusting features give greater sensitivity and a reduction in steering effort, while maintaining road feel.

to an efficient long-lasting unit that does a good job of converting engine power in the right ratios at the right time to the rear wheels. With this type of research and development, a constant-speed drive should be right around the corner.

ONLY THE MAJOR ENGINEERING IMPROVEMENTS on 1959 cars have been reviewed here, but others are sure to appear during the production year. Among the wide choice offered in the new models, select the engineering features that have the most appeal or use for you. The only way to have all the "all-news" for 1959 is to buy one of each with the feature you desire, strip them down and assemble at will. Would you have achieved the perfect car? /MY

2-SPEED TRANSMISSION



New two-speed Ford transmission has aluminum case, 105 fewer parts, lighter weight. Servo bands for low and reverse, and multi-disc clutch for high range give smoother operation.

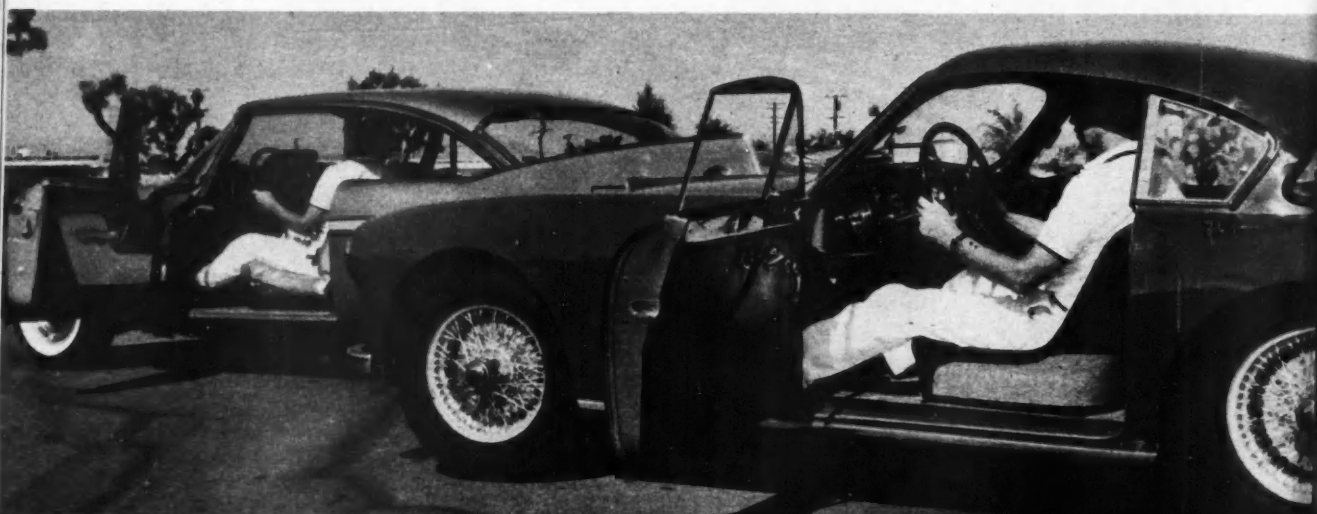
driving
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**PLYMOUTH
SPORT FURY
VS
LAGO AMERICA**



Biggest difference between the Sport Fury and the LAGO is in their trunk compartments. Luggage from the LAGO would be swallowed up in the Plymouth. LAGO also has a covered spare and a complete set of useful tools.

Seating positions of the two cars are quite similar, with low-to-the-floor seats, fairly vertical steering wheels (though the LAGO's is higher), with about equal headroom and legroom. Both have good vision.



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"WHY COMPARE TWO CARS as dissimilar as a Plymouth Sport Fury and a Lago America? One's a Detroit stock machine, and the other's a sportscar, isn't it? Would the same kind of person be interested in both of them?" Before answering these questions directly, let's set the stage.

There are mainly two camps of car enthusiasts: the ones for American cars, and the others *against*. In both you'll find rightists and leftists, and then there are those who are either middle-of-the-roads, or who like a little of both types of cars. This latter group is the one such a comparison should mainly appeal to, for they are the potential buyers of either of these cars.

Those who like only the imports constantly berate the Detroit cars, particularly in size and handling. But, listen to what sportscar-lover Jeff Cooper said after driving the Sport Fury from Los Angeles over the mountains, down to Death Valley, and back:

"As you know, I am not enthusiastic about Detroit's utility cars. But this '59 Fury has changed my mind. It not only howls, but handles!

"Naturally, it's too big and heavy to be flung around tight corners like a competition machine, but on open, high-speed bends it is nothing short of great. Its firm road feel is comparable to a good sportscar, an unheard-of achievement with power steering. And right up to the ragged edge I couldn't force either tire squeal or any appreciable roll.

"If it were my business to run down speeders on the highway, or if there were a class for production sedans in a revived Mexican Road Race, my unhesitating first choice would be a '59 Fury."

THAT'S QUITE A TESTIMONIAL from one who doesn't like Detroit cars. But what about the other side of the fence—the person who likes only the Detroit cars? What does he think of the Lago America? Here's what one such person (who asked not to be named) had to say after driving this latest Gran Turismo car to invade the U.S.

"At first I thought this car would be like all the other imports it's been my unfortunate luck to drive. I figured it would have a cramped-up driving compartment with no room for the feet, that it wouldn't be able to get out of its own way, and that its ride would be as choppy as a canoe in the rapids. But, I was in for a pleasant surprise!

"I had plenty of headroom and legroom (and I'm almost six feet tall), that 2.5-liter V8 has a throaty, husky growl that gets the message through to the rear wheels, and the ride wasn't at all choppy as I expected. There's sure a difference in the way the various imports handle—this one I'd class close to an Aston Martin.

"The greatest thing about the Lago is probably the way it's put together. What quality! Wish our cars had that."

IF OPPOSING CAMPS can have such nice things to say about cars they generally don't like, why not compare them? This is what crossed my mind after these views were made known to me. Sure, there's a difference in size, in horsepower, and price. But in concept, not so much.

Though the Plymouth Sport Fury is not specifically designed for high-speed touring, as the Lago America seems to be, the fact that it has good performance, handles exceedingly well, and gives a smooth ride makes it as much a Gran Turismo car as the Lago. What I'd like to see is a Sport Fury in the hands of a good rally driver entered in some of the European rallies that are dominated by European entries. Something like the Tour de France would be more than interesting. How about it, Chrysler? I don't think the A.M.A. would mind.

To get back to the comparison. Besides driving each of the cars for several days, switching from one to the other, I thought it would be a good idea to take both cars over our city-freeway-mountain-desert course at the same time, driving first one, then the other. Because I didn't want to use a tow bar, and because I haven't yet mastered the technique of driving two cars as the Romans did with chariot teams, I called on Associate Editor Wayne Thoms for help. So, early one morning, the two of us, plus photog Pat Broilrier, fueled up both cars with Mobilgas Special, and headed for the Hollywood Freeway.

With my trusty Grundig tape recorder beside me in the Lago, I began taping some of my first impressions: "Everything falls close to hand . . . Clutch and brake pedals have plenty room around them . . . Drive tunnel makes good resting place for foot . . . Gearshift in comfortable spot—just slightly to right and below where I hold my right hand on the wheel . . . Wheel too high." (Checking this point later I found that with two universal joints in the column, it would be an easy matter to drop it. And this the Talbot-Lago firm

has since done.) "Notice some vibration from fairly smooth freeway road surface, both in wheel and seat of my pants . . . Doing over 50 now and rear view mirror vibrating so badly, can't see anything but a blur in it. Outside of that vision good in all directions.

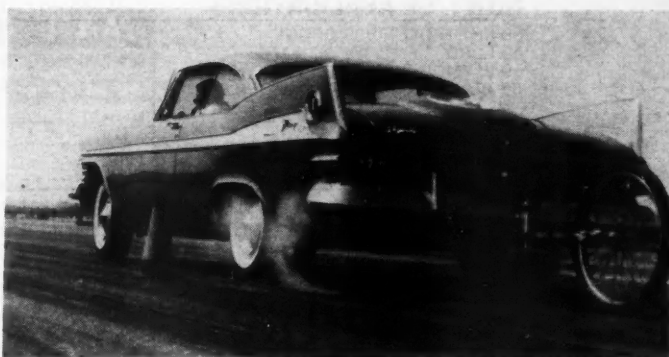
"Don't like instrument panel setup. Speedo and tach are two large dials, with oil pressure gauge at bottom of speedo. These you can read, but not the water temp and gas gauge. They're blocked by the combination horn-lights-turn indicator attached to the column. (This may be corrected when the wheel is dropped.)

"Steering of Lago exceedingly quick . . . Car stable in straight line . . . Picking up speed now, and even though it's hot outside, with both windows down, vent panes open, and rear quarter windows open, inside is ventilated well."

At this point we made our first car switch, since there was about the same amount of freeway driving to be done before entering the mountains. These were my immediate, taped reactions in the Plymouth:

"What a tremendous difference in size!" (And there should be this feeling, for the Plymouth measures 56, 80 and 217 inches in overall height, width and length to the Lago's 52, 66 and 165.) "Steering seems loose. I'm winding it like a crank to get through a normal turn." (Has ratio of 19.1 to 1, while Lago is 12.5 to 1.) "I'm looking for things to do. All I did was turn the key, punch a button, and it takes care of itself . . . Smooth enough shifting, just like the ride—bit smoother than the Lago.

"Vision good all around, except those large fins would hide a small car or a sportscar. I'll have to be extra careful moving over into the right lane . . . Both windows down now, and there's not much wind noise, less than the Lago."



Fury has great low-end torque, will spin rear wheels off start line.

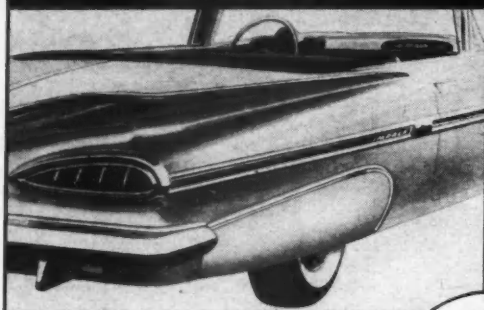
We made several more switches between the two cars, and I particularly noted differences in performance and handling. With a 2.5-liter BMW V8 engine that at the most gives 140 horses, if the Lago can't stay with the 305 furious horses of the Fury, you can see why. Going up through the marvelously smooth gears of the Lago's Z-F gearbox, you can get about 28 mph with first at the red-line mark of 5800 rpm, 59 out of second, 93 out of third, and about 126 out of fourth. Getting there will take longer than in the Sport Fury, which clicks off a true 45 mph in 5.5 seconds, 60 mph in 8.5 seconds, and crosses the quarter-mile mark in 16.2 seconds, doing 87 mph. Its passing ability is just as impressive: it takes but 3.2 seconds to go from 30 to 50 mph, 2.9 from 45 to 60, and 7.4 from 50 to 80.

Here's what I noted on tape about the handling of the Lago during mountain and desert driving: "The faster I go, the better it seems to like it . . . Hasn't bottomed once on these bad drainage dips, and I'm clipping along at a good speed." (Plymouth did bottom on this section.) "No trouble keeping it in a straight line . . . Climbing now. Past the 5000-foot mark and temperature is up to 200. Dropped down a gear . . . Temperature dropping . . . If you want to push this car hard, you can have fun. Rear end breaks loose much before you expect it, but keep it revved up, your foot stuck in the throttle, force it into a drift, and you're through in good order . . . Have to use gears a lot, brakes not too much, but when you do they really stop you down . . . Notice Plymouth not having trouble staying with me."

continued

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ALLOY-COATED STEEL construction

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The ORIGINAL
FIBERGLAS PACKED MUFFLER

Driving Around

continued from page 83

Driving the Plymouth I soon found out why it wasn't having trouble staying up. First of all, it has twice the power. Then, once you get used to the lack of actual "feel" of the road because of the effortless power steering, you find it will take the corners unusually fast. To top it off, by using the pushbutton transmission properly, you get the benefit of deceleration and acceleration from any one of three gears. (Besides which, you save the brakes for when you have to use them; the Plymouth's brakes are no better—nor worse—than most Detroit cars.) Probably the main difference in handling between the two cars is in the width of the road; the Plymouth, being the wider, needs more room to get around a corner.

After we got back to town, we topped off both tanks and found that while the Plymouth delivered 12.5 miles for every gallon, the Lago got 15.8. But if you hope to make up the difference in price between the Fury's \$4000 and the Lago's \$7600 on the basis of fuel economy, don't bother—unless you plan to drive it longer than 69 years. If you drive 10,000 miles per year, and pay 31 cents per gallon for gas, you'll save about \$52 a year. Figure it out for yourself.

You could probably get much better mileage with the engine that the Simca people are dropping into the Lago now. They just recently bought the Talbot-Lago factory in Suresnes, France. Their first act was to submerge the BMW in place of their own Ford 60-like-V8 that even with a higher compression ratio and two carbs will be lucky to get 115 hp. The West Coast distributors, Lago America Inc., tell me that they'll continue to provide BMW V8s in the cars they deliver. But who knows, with Chrysler owning 25 per cent of Simca, maybe they'll eventually put a Plymouth engine in the Lago. Wouldn't that be a switch?

After driving two cars like the Lago and the Plymouth, the usual question I'm asked is, "Which one do you like better?" or "Which one would you buy?" Actually, what I'd like to see is a combination: a car of a size somewhere in between the two, with the performance of the Plymouth, the Z-F four-speed gearbox of the Lago, the ride and handling of the Plymouth (though just slightly stiffened up), and the workmanship and finish of the Lago. But, if I had to choose on the basis of what they now offer, I'd take the Plymouth. To me the Lago America is not worth almost twice as much as the Sport Fury. /MT

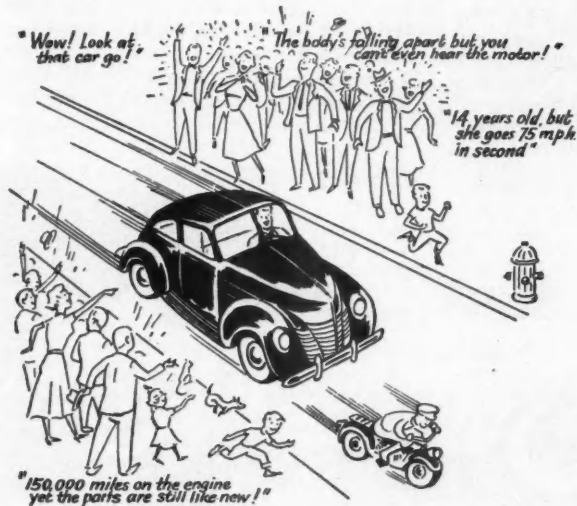
Next month . . .

WILL THE ELECTRIC CAR STAGE A COMEBACK?

Read about this strange, new
lightweight storage battery car

—planned for production!

Here's How a \$4.95 Magna-Power Saves You up to \$200...or your Money Back!



Does YOUR car give you the pep and power it had when new?

- if not you need a Magna-Power! With a Magna-Power you can save 80% of your engine repair bills and have a "new" car longer.
- it takes only one minute to install — at a cost of less than .005¢ per mile (five/thousandths of a cent!).
- a \$4.95 investment in a Magna-Power will return itself IN FULL every time you change your oil — and keep on doing so for years, saving you hundreds of dollars in formerly unnecessary oil changes, engine repairs, etc.

As one Magna-Power fan wrote: "There is no excuse whatever for a man to change oil every 2000 miles if he knows there is such a thing as a Magna-Power antacid neutralizing drain plug." And, of course, that fan's 13-year-old Chevy is his pride and joy — and is

never in the repair shop — except for minor tune-ups, lube jobs, etc., then presto! On one oil change the entire \$4.95 saved — and his engine protected against acid corrosion — runs like a clock — quiet as a watch — "powerful as a B52" — a car with an engine that will not let you down — that actually increases in power, pep, speed and performance the older it gets. More automotive engineers, oil chemists and mechanical engineers have installed Magna-Powers on their engines than any other proportionate group of our population. And thousands of Magna-Powers have been bought by critical people in the past 9 years — people who save hundreds of thousands yearly — and more important, get for themselves increased trade-in allowances amounting to hundreds of dollars for turning in mechanically perfect cars.

HERE'S WHAT'S IN IT FOR YOU

1. OIL

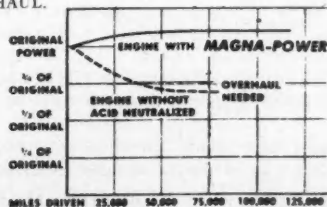
Your oil will last longer! You can not only change less often but also get more miles per quart in between. See for yourself! Put samples of your oil in 2 Pyrex baking cups and heat to 300°F in a GAS FIRED oven — one with the Magna-Power and one without. After 2 hours, shut it off and allow to cool for several hours. Start up the oven again and repeat the whole thing. Keep repeating until 45 or 50 hours of high temperature have been run. (High priced oils may need longer.) Examine the oils and put a drop of each on a white blotter for comparison. The spots below show the vast difference in oil breakdown.



Two oil spots — one with Magna-Power, one without! These came from the same can! — a well known, nationally available, top grade brand. See text for test conditions. This is the same thing that happens in your engine. The oil warms up in contact with hot blow-by gases — the moisture condenses in the oil, makes acids and breaks down even the best oils.

2. POWER

Engines maintain full power (or actually increase) — for amazingly long mileages. Many have 180,000 to 200,000 miles and more — WITHOUT ANY MAJOR OVERHAUL.



3. IGNITION

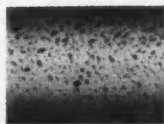
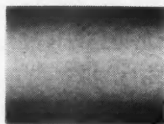
Actual experience shows that your spark plugs should last 2 or 3 times as long as now when they are not fouled by the filth and goo that normally collects in your oil — dissolved in it, so the filter cannot remove it.



The plug shown is 1 of 8 with 61,810 miles on them and still showing nearly new efficiency. One engine has gone 188,438 miles so far on 2 sets of plugs — it is still in top condition!

4. WEAR

Measurements show reductions with Magna-Power of 3 to 1 or better under the same conditions.



The bearing at left above is from an engine with Magna-Power after 112,000 miles in 11 years. It is still good for many more years of service and 4 times the miles. At right is one from a similar unprotected engine after 63,000 miles; IT IS WORN OUT!

WHAT IS MAGNA-POWER?

Magna-Power is the new direct way to kill acid. Acid is the real cause of engine wear. The oil companies are spending millions to add acid neutralizers to their oils but these are not permanent.

WHERE DOES THE ACID COME FROM?

Gasoline has sulphur in it. When sulphur burns it makes sulphuric acid right inside your engine. Sulphuric acid eats metal. It destroys detergents and spawns more acid. Little by little the engine is eaten away. Acid is one of nature's methods of reducing metals to their original primitive state.

HOW TO NEUTRALIZE THIS ACID

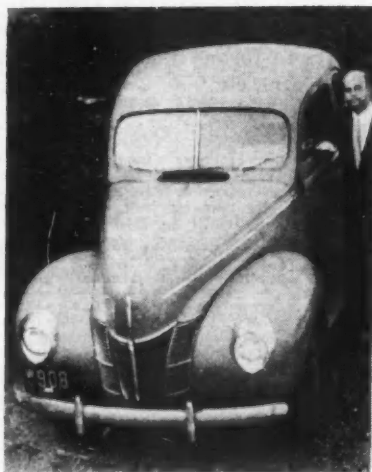
The easiest and surest way is to use a solid chemical neutralizer attached to your oil pan drain plug. The Magna-Power is a drain plug with a rod of special alkaline metal alloy. Acids much prefer this naturally alkaline alloy to the other metals in the engine; but in eating it these corrosive acids are destroyed. Yet there is enough alloy to last 100,000 miles.

GET A MAGNA-POWER TODAY — NOT A NEW ENGINE TOMORROW

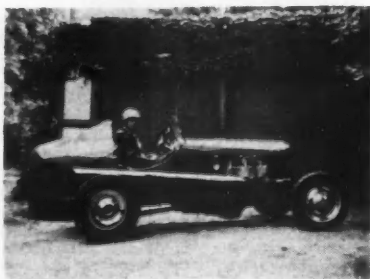
Turn the page and read the amazing stories of Magna-Power!



Fabulous '51 Ford is shown here with owner Lucius Kingman of McLean, Va. Purchased new by Kingman—Magna-Power was installed in it after 15,000 miles—the car now registers over 100,000 miles. "It has more power now than when it was new," says Kingman. "The spark plugs last about 40,000 miles! Amazingly, it burns almost no oil—maybe a quart every 1,500 miles!"



Original test car still performs with amazing power and smoothness—with 183,346 miles on it! Johns (above) had the pistons removed for inspection when the car registered 116,942 miles and there was practically no wear! Magna-Power helps any car—old or new—stay young, healthy and more powerful longer!



Pikes Peak Racer built by George Balster of Lincoln, Neb., contains a 3-carb, full-race '50 Studebaker engine. George credits Magna-Power with providing "more power, faster starting and a remarkable elimination of wear on all moving parts." Also Magna-Powered is George's family car, a '51 Chev. Sedan with 78,000 miles on it!

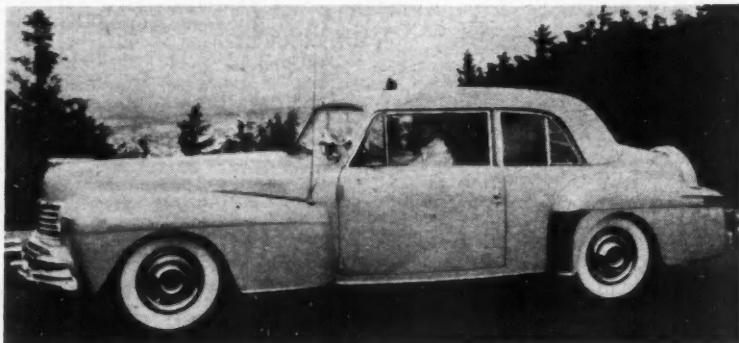
(Advertisement)

The Story of Magna-Power

—the amazing magnesium-alloy accessory that actually triples the life of car engines

The principle of Magna-Power was discovered by accident!

During the hectic early years of World War II, a brilliant young M.I.T. graduate named Win Johns was doing vital engine testing work for the U. S. Navy. One of the rigorous tests was designed to discover how long an engine could be run at 250° F. before it burned out. One engine was set up and run at 1800 for 50 hrs. But—at the end of that time, the engine showed no sign of burning out. Johns and his staff tore the engine down and discovered, to their amazement, that there was little or no wear!



Continental Classic is kept in like-new condition by owner C. F. Childers of Portland, Ore. Since installing a Magna-Power in this '48 Cont., Childers says, "I can notice an increase of power. It runs smoother than a new car. The plugs stay perfectly clean. And even after being garaged for several weeks, I get trouble-free starting."

Discovers Principle

Johns reasoned that this test engine somehow was not being subjected to the factors that cause wear under normal operating conditions. It was found that since this engine was operating *above* the dew point of the blow-by gases, no moisture was getting into the oil, as is common with car engines. Johns knew that sulphur present in all grades of gasoline was (after combustion) combining with moisture in car engine crankcases and forming sulphuric acid. It is this sulphuric acid that attacks the vital parts of engines, aids the formation of damaging sludges, gums and resins and causes 90% of all engine wear. Johns then reasoned that if there were some way to destroy the acid that forms in the crankcase of car engines, he would be able to stop the major cause of engine wear and power fade.

Develops Magna-Power

Putting this principle to work, Johns experimented by putting various alloys of magnesium in engine oil to help neutralize and destroy the corrosive acids as they are formed. After many months he developed a special magnesium alloy that was perfect for the job.

Then came months and months of testing to prove beyond a shadow of a doubt that his discovery actually did stop the major cause of engine wear. Johns equipped a 1940 Ford coupe with his special magnesium alloy by attaching a bar of the metal to his crankcase drain plug. He also attached a tiny Alnico magnet to the magnesium to remove any iron or steel filings in the oil. The car was then driven in normal use—stop and go, short trips and long trips. After the Ford had been driven 115,000 miles *without* a single major overhaul or repair, the pistons were removed for inspection. Everyone—including the inventor himself—was astonished!

There were practically no signs of wear! Some of the original machining marks were still visible on the rings and pistons. The engine was put back together again.

Today Johns' 1940 Ford is still being driven every day. It now has 176,129 miles on it! Imagine! 176,129 miles! It still retains the pep and power it had the day it came off the assembly line!

Many thousands of miles of controlled tests were conducted on other cars and trucks before Johns put Magna-Power on the market. In one notable experiment,

JOHNS RESEARCH LABORATORIES, DEPT. M-1, MIDDLESEX, N. J.



Magna-Powered trio, owned by the Stout brothers, Arthur and Robert, of Plainfield, N.J., is made up of '56 Chev Bel-Aire Conv., '38 Ford Station Wagon and '26 Lincoln Phaeton (Brunn Body). Bob (shown above) and Art are firm boosters of Magna-Power. "All of our cars have more pep and power due to the Magna-Powers

in them," Art states. "Our 'baby,' the prize-winning Lincoln, doesn't burn any oil at all. And the oil stays perfectly clean between changes. I'd say a Magna-Power is definitely worth much more than the price you pay for it!" Not shown above is Art's family car, a '54 Nash Rambler—also Magna-Powered!

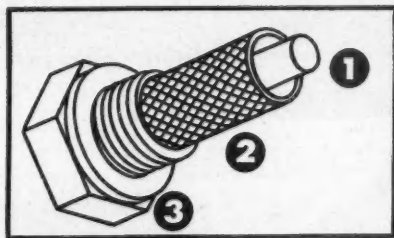
the Farmers & Consumers Dairy Co. of Morristown, N.J., put Magna-Power in half of their 22 door-to-door delivery trucks. After being driven many thousands of miles, the engines without Magna-Power showed $5\frac{1}{2}$ times more wear than that of the engines with Magna-Power.

How Magna-Power Works

Just exactly what is Magna-Power—how does it work? Actually, Magna-Power is a very simple little device. It is a carefully machined bar of a special magnesium-alloy metal. It is attached to the crankcase drain plug (the correct size for your car). It cannot come in contact with moving parts. But it is always in direct contact with your engine oil. Here are the three main things Magna-Power does: 1. effectively neutralizes (destroys) corrosive acids in your oil; 2. greatly reduces the formation of damaging sludges, gums, and resins; 3. destroys the cause of deposits on spark plugs . . . deposits that rob by pre-ignition and internal shorting.

Magna-Power's Benefits

The direct benefits Magna-Power can give your car engine are these: It reduces wear on vital moving parts up to 80%; it increases engine power by eliminating sludge and resin formations; it slows the deposit build-up on spark plugs—promotes far longer plug life; it allows you to use your oil efficiently for over 3,000 miles before a change is necessary.



1. Powerful Alnico magnet that removes damaging iron and steel filings from the oil.
2. Special magnesium alloy metal that constantly neutralizes and destroys all corrosive acid in the oil as it forms.
3. Crankcase drain plug—the correct size for your car.

Why Magna-Power is not in new cars

A new car (or a rebuilt one) has to go through a break-in period. The new car engine must actually "wear in"—loosen up for maximum efficiency. Because Magna-Power cuts engine wear by 80%, new car engines would not break in correctly until about 25,000 miles! Magna-Power should be installed in new cars at the end of the normal break-in period when you change oil. Cars that are already broken in—

whether you have 5,000, 20,000, 50,000 or 75,000 miles on your car—can be greatly benefited by Magna-Power immediately!

30-DAY FREE TRIAL

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MOTOR SPORTS

PICTORIAL

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... Then you can win in MT's monthly photo contest. We're looking for the best photos taken each month in the field of motor sports—whatever they might be. And we'll pay \$25 for 1st prize, \$15 for 2nd, \$10 for 3rd. If we select a photo sequence, we'll pay the place award, plus \$7.50 for each additional shot. Photos should be black-and-white glossy, 8x10s preferred, with 4x5s minimum size. Identify all photos with names, dates, locations. Don't send negatives. Photos cannot be returned. Send to MT Motor Sports Pictorial Contest, 5959 Hollywood Blvd., Los Angeles 28, Calif.



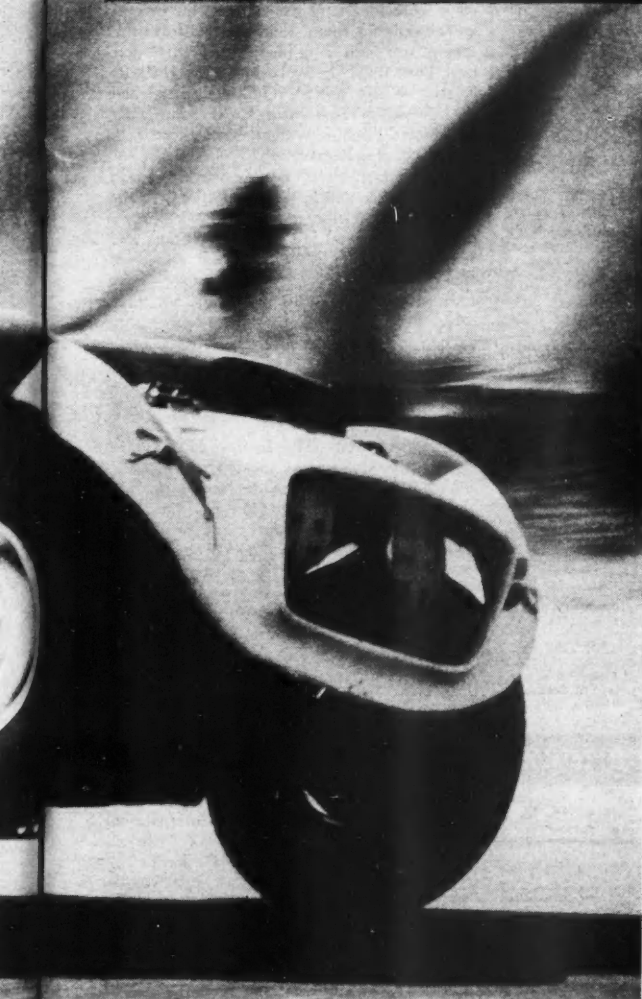
Roberto Ricci takes first prize this month with a dramatic shot of Robin Cooke's Crosley Special making a tricky two-wheel turn at Santa Barbara.

Gunther Molter snapped an unusual third place photo when he caught Harry Schell giving Maurice Trintignant a lift during a recent Grand Prix.





Pit action was important during Moroccan Grand Prix practice. Ultimate winner Stirling Moss, far right, waits as tire wear is checked, plugs are changed. Photo by James Foulkes.

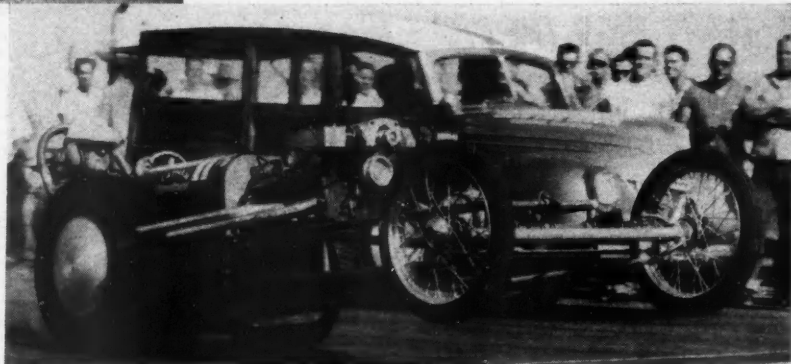


MOTOR SPORTS, U.S.A.

Tony Bettenhausen won his second USAC national big-car championship this year without placing first in any race this past season. His second place in the Bobby Ball Memorial Race at Phoenix sewed it up . . . Riverside repercussions . . . Jean Behra was handed a 100,000-franc (\$240) fine and six months' suspension by the FIA for driving at the recent Riverside sportscar Grand Prix. Reason: he failed to obtain permission from the Automobile Club de France. Adding insult to injury, Riverside organizers were fined \$1000 for letting him compete. This won't keep Behra out of Sebring. He may request special permission to run . . . Sebring stages a double-header March 21-22. The 12-hour World Championship sportscar race goes Saturday followed by an honest-to-goodness World's Championship Formula I Grand Prix race on Sunday. These events will be worth seeing, even if it means leaving the wife and kiddies at home. Report is that Franklin D. Roosevelt Jr., Washington, D.C., imported car distributor, is negotiating for three factory Abarth-Fiat's to enter the sportscar segment . . . Imported car Mobil Mileage Rally, held in Los Angeles in October, will set pattern for future Mobilgas Economy Runs. Mileage Rally was set up on a straight miles-per-gallon basis with classes according to engine displacement. Looks like no more ton-miles per gallon, a factor which has little significance to Joe Consumer . . . Motor competition in the U.S. comes into its own in '59. Eight events will have FIA approval, including sportscar races at Miami's Orange Bowl, Riverside, Sebring and Daytona Beach Speedway. The Pikes Peak Hill Climb, Indy 500 and GP races at Sebring, Daytona Beach and Watkins Glen are included . . . Daytona Beach International Speedway is predicted to be fastest in country. The 2½-mile oval has 31-degree banked turns which veteran drivers claim will be full throttle all the way. Course opens early in '59 . . . NASCAR cracks down, suspending and taking championship points from 31 drivers who participated in an October sportsman stock car race at the Langhorne Speedway . . . Although it will be some time before Mickey (fastest man at Bonneville) Thompson walks again after an accident during Riverside practice, he is proceeding all-out with plans for his new streamliner. His aim—to crack the 400 mph mark. In other words, bring the record to the U.S. . . . Proving that a leadfoot can be lined

continued

Second place this month goes to Don Nickles, who caught the Dragmaster in "wheels-up performance" coming off the starting line at the Santa Ana, Calif. dragstrip. It was headed for a speed of 137.31 and low elapsed time of 9.92 seconds.





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MOTOR SPORTS

continued

with gold, NASCAR's Glenn (Fireball) Roberts of Daytona Beach earned \$38,045 through October, when the season came to a close . . . Racing loses a friend. Roger J. Wolcott, 65 Indianapolis business leader and sportsman died of a heart attack on November 1st. Wolcott had cars at Indy and on the championship trail for the past 12 years. He will be missed . . . As the racing season slackens off in colder parts of the country, car owners are descending upon Southern California to arrange for new equipment for '59. Orders have been lined up by Lujie Lesovsky, Frank Kurtis, Willie Sutton, Quinn Epperly and A. J. Watson. They will be turning out faster and better machinery than ever before . . . Lee Petty, Randleman, N.C., wins NASCAR Grand National division championship ahead of Buck Baker and Speedy Thompson. In the Convertible division it was Bob Welborn, a repeat champ from last year. Larry Frank and Joe Weatherly tailed with second and third . . . USAC plans a major late-model stock car racing circuit, until now NASCAR territory. They have signed John Marcum, a Toledo race organizer and formerly president of the Midwest Association for Race Cars, to be National Stock Car Representative.

FROM OVERSEAS

Hail the new GP champ—Mike Hawthorn. His second place in a Ferrari at Casablanca did the trick. Stirling Moss, who won the race in a Vanwall and posted fastest lap, was nudged out by one point. Phil Hill (Ferrari) finished third but dropped back from second spot to let Hawthorn move ahead to the position he needed for the World's Championship. Hawthorn won only one GP (France) all season, but had amassed enough points in his six best races with second places to win by a nose. A note of sadness after victory was the death of Stewart Lewis-Evans who suffered burns when his Vanwall crashed . . . New Italian Formula Junior cars may be matched against U.S. midgets on stateside road circuits. Could make interesting competition . . . Four U.S. drivers have made Grade 1 international status. Phil Hill, Masten Gregory, Carroll Shelby and Harry Schell share the honor . . . New Grand Prix Formula 1, effective in 1961, is not making friends in England or the U.S. Plan will keep engine size between 1300-1500cc limits, weight to 500 kilos (1100 pounds) minimum. Vanwall may very well withdraw from GP racing. Colin Chapman claims not to know how to build a Lotus that heavy without weighting it with cast iron. Mike Hawthorn calls it a catastrophe for motor racing. It is hardly surprising that Porsche and Borgward have not voiced any disapproval. Possibility is an additional formula which would suit cars already designed and running in Britain, Italy and America.

SOUTH OF THE BORDER

Plans are under way for a February sports-car race in Santa Ana, El Salvador. A new circuit on the outskirts of town will be used in preference to the old one in the city streets. Invitations have gone to many top U.S. and European drivers. A Gran Turismo race and an event for European stock cars will be run in conjunction.

/MT

CLASSICOMMENTS

by Robert J. Gottlieb
Classic Car Editor

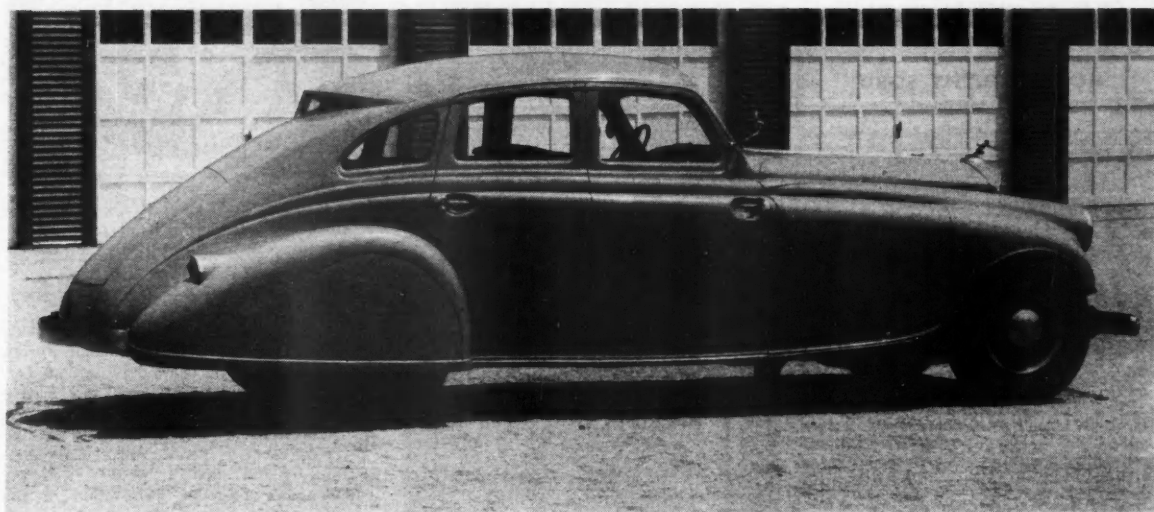
FOR YEARS we have advised owners of classic, antique and special interest automobiles to carry proper insurance on their cars. We have felt that the average enthusiast pays too much for insurance, and that the average motorist does not have insurance protection tailored to his own particular requirements.

Seeing this important need, the Petersen Publishing Co. has formed an Insurance Division that will offer a special service to our readers. The publishers are not going into the insurance business; they are making available to interested readers a source of authoritative advice on automobile insurance problems. Acting as insurance broker and counselor will be the Van F. Joy Co. of Los Angeles.

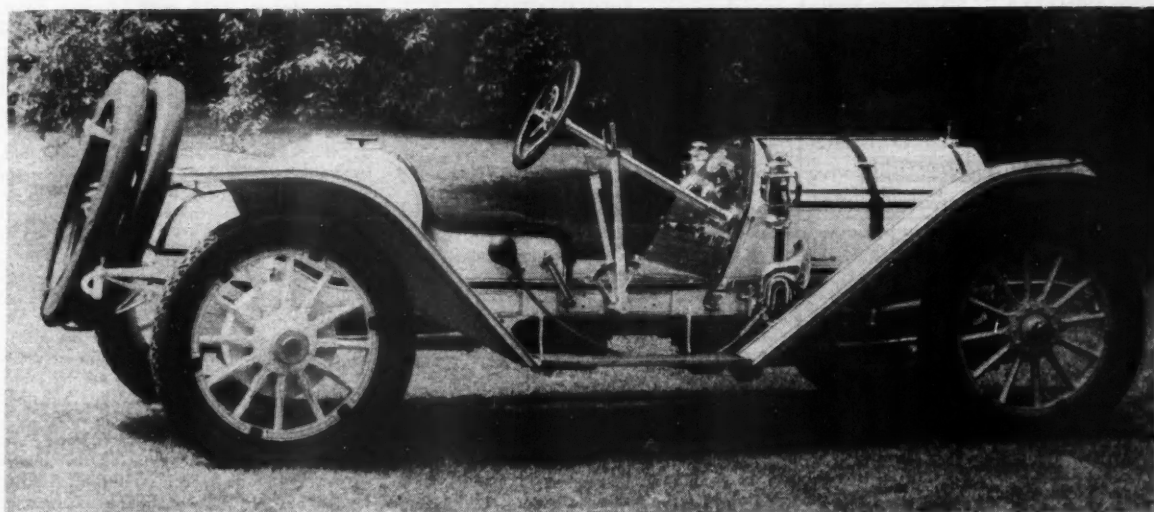
To help you analyze your insurance coverage, you can obtain a brochure describing proper protection at minimum rates. Address your inquiries to Petersen Insurance Division, 5959 Hollywood Blvd., Los Angeles 28. You will also receive a comprehensive list of all American and foreign classics, to help you evaluate that "beauty" you may be thinking of buying.

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Our New York representative, Steve DaCosta, had an interesting conversation with Henry Austin Clark Jr., of the Long Island Automotive Museum in Southampton, N.Y. In his display he has only a few classics, one of them being the 1933 Pierce Silver Arrow, built for the Chicago World's Fair. Mr. Clark says, "We find more interest every day in classics, but what I cannot get used to is the increasing number of enthusiasts who are buying and restoring everything from 1929 Chevrolets to 1953 Vignale Cunninghams." He went on to say that at least there would now be saved a more representative cross-section of automotive history, "... instead of just icing on the cake."



Prize classic of the collection at the Long Island Auto Museum is this 1933 Pierce Silver Arrow, one of six built for 1933 Chicago World's Fair.



T-head 1911 Mercer Raceabout, glistening in restored glory, is oldest known example of the Finley R. Porter-designed sports-competition chassis.

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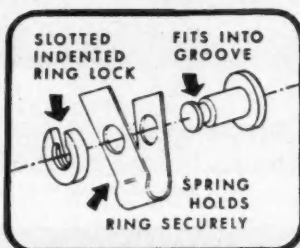
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TRENDS in New Products

(Information below is based on news releases from the manufacturer or distributor. MOTOR TREND has not tested any of the specific products listed, and therefore does not necessarily endorse them. Tested items are featured in our Product Use Tests.)

THE GROWING POPULARITY of imported cars has prompted Sears Roebuck & Co. to enlarge their 1958 Fall and Winter Catalog to include a section on accessories for these imports. Two full pages list top and rear deck carriers, plastic hardtops, car covers, tail pipe extensions, carburetor and distributor tune-up kits, mufflers, spark plugs, and batteries for 30 different makes of cars. Of special interest to VW owners is a dual carburetor conversion and an engine repair kit. Sears has been careful to select products only from manufacturers whose reliability can be backed by their reputation and their guarantees.

KWIKEE LICENSE PLATE HOLDERS are just that . . . quick. No screws are used, and the material is rust-proof. With the need to change to 1959 plates approaching, there is no reason



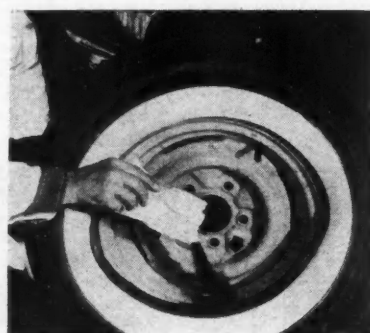
for replacing those rusted bolts with the same thing, when these simple snap-type fasteners that require no tools are available. A set of four retails for 79¢ from Inland Manufacturing Co., Dept. K-99, 1108 Jackson St., Omaha 2, Neb.

GOODYEAR HAS ANNOUNCED a full line of stock car racing tires: the Blue Streak for use on high-speed asphalt and hard-surface track; All-Weather Speedway for asphalt and dirt tracks; and, All-Weather Raceway for dirt and loose-surface tracks. All use 3-T nylon cord and feature round contour profiles. Heavy-duty racing tubes are available for all tires.

EDITH'S TERRY CLOTH and corduroy seat covers are handmade by Edith herself in her small shop in Bakersfield, Calif. A double-needle sewing machine head provides seams that do not break or ravel, especially after washing. Loose threads and the start of breaks are prevented by this type of seam. Only

the best grade of materials is used by Edith, who has expanded her selection of seat covers to include Volvo, Renault, Ghia, Triumph, MG, Austin-Healey, Jaguar, Mercedes and Simca, in addition to the original VW and Porsche covers. Red, beige, silver, maize, charcoal and green are the terry cloth colors, priced from \$8.95. Corduroy is available in red, blue, toast, charcoal and camel, from \$10.95. Edith's Seat Covers, Box 1221, Bakersfield, Calif.

AIR-GUARD, a tubeless tire puncture sealer developed by the United States Rubber Co., is a fine dry rubber "mist" that is dumped into the casings. Tire balance is not impaired and the finely divided powder rushes to any



hole through which air is escaping, plugging it immediately. The U.S. Rubber Co. recommends that it be installed only by their dealers who are prepared to treat five tires—at a suggested retail price of \$8.95, including labor.

THE INTERNATIONAL TIRE AND RUBBER CO. has announced that they are manufacturing a complete line of heavy-duty storage batteries for automotive, industrial and marine use. Known as the Borolyte Battery, it gets its name from the Boron derivative used as a wetting agent in the electrolyte. The manufacturer claims that a wetter electrolyte allows more thorough penetration of the plates, increasing current output. Heavy-duty cases, rubber separators and rigid production controls are all aimed at producing a good reliable battery with long life and high output, backed by a service and exchange warranty pro-rated for seven years for passenger car use. Prices start at \$31.50 for the smallest six-volt passenger car unit and extend to as high as \$250 for the eight-volt extra-heavy-duty marine and stationary battery. Fleet and distributor prices are available from International Tire and Rubber Division of Ward International, Inc., 2126 S. La Brea Ave., Los Angeles 16.

GRAPHITE AS A LUBRICANT has always posed special problems in adapting it for use with liquids. Mined graphite contains quantities of silicates that are hard to remove. Any of these abrasives that remain reduce the lubricating qualities of the tiny flake-like particles of graphite. These same flakes are reluctant to stay in suspension except when agitated, and clog oil lines and passages.

Acheson Colloids of Port Huron, Mich. have developed a process of reducing petroleum-extracted graphite to such small particles that they remain suspended in liquids indefinitely. Petroleum graphite, extracted by electric furnace process, is "clean," i.e., it contains no

silicates or other hard-to-separate impurities and will stand temperatures far in excess of the 1200° of mined graphite.

Divided into particles less than 40-millionths of an inch, Acheson graphite can be suspended in water, petroleum oil, castor oil, lacquer, naphtha, alcohol, mineral spirits, and about any other liquid desired. The particles are small enough to pass through automotive oil filters and will not settle out if left standing. The manufacturer claims that lubrication is increased due to the microscopic flakes adhering to the contacting surfaces, resistance then being imparted to the very low coefficient of friction between the flakes rather than the contacting metal surfaces directly.

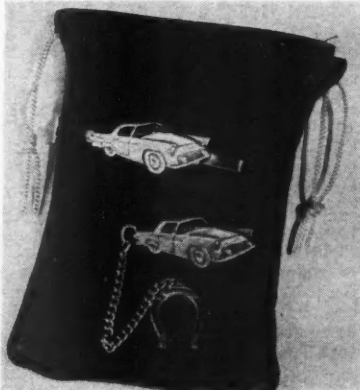
Acheson graphite colloids are now being blended with petroleum oils for automotive applications, such as crankcase additives, top cylinder lubes, and transmission applications by HRL, Inc., 923 E. Third St., Los Angeles.

THE ELECTRIC AUTO-LITE CO. announces a new Prest-O-Lite battery, claimed to give longer life because of a new method of construction that resists the effects of vibration. Known as the Vibration-Proof Hi-Level Battery, it is engineered with top and bottom support of the plate units and a specially developed seal that welds them and the outer case into a rigid shake-proof unit to reduce mechanical failure. The cover is also one-piece welded to the case for greater strength, producing a smooth top that does not soften with heat or develop leaks. To further enhance the appearance of their new unit and identify it as a Vibration-Proof battery, Prest-O-Lite has finished the outer case in gold instead of the usual black. Available as a replacement for all domestic car batteries and most imports, they carry a 50-month guarantee and are now on sale at all Prest-O-Lite battery dealers.

CAR-SKIN, a new single-solution cleaner for automotive finishes, claims to dissolve road film and paint oxidation without abrasives, exposing the brightness of the original finish. To prevent recurrence of oxidation, cleaned surface should be waxed with Car-Skin Sealer or Car-Skin tempered wax. Recondi-

tioner available from parts houses and service stations or direct from Car-Skin Products Corp., Flemington, N.J., for \$1.45 for 16-ounce can.

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back in sizes 7½ to 10 for men, 6½ to 7½ for women, are \$7.95 in tan, \$8.95 in black. James Auto Specialties, Box 151, Pasadena, Calif.

STUTZ BOB CAT, a sportscar for small fry, is a real gasoline job in a do-it-yourself kit. A strong channel frame and adjustable seat will safely handle any adult who has the urge



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PRODUCT USE TESTS

Conducted by **Charles Nerpel** Technical Editor

Carb-Airator controls air-to-fuel mixture on hot engines

A TINY THREADED BLOCK about one-third the size of a cigarette lighter is a good solution to rough idling of hot engines. By hot we mean an engine whose heat has transferred to the carburetor, causing an over-rich mixture during idle periods, especially in hot weather or when hard and fast driving is encountered. Rochester Products Division of General Motors has developed a simple method of increasing air to the fuel mixture when carburetor flanges or bodies reach 140° F. An adjustable bi-metal spring operates a flap-type valve which opens or closes as temperature rises or falls. Two screw adjustments allow control over valve action and quantity of air bleed. Naturally it fits all Rochester carburetors, and is a built-in feature on some of the Rochester-equipped 1959 cars.

The ½-inch pipe thread fits throttle bodies or it can be connected with a tee fitting to manifold accessory connections such as wiper or brake booster, but not to distributor vacuum line. The manifold can also be drilled and tapped near the carburetor if no connecting point is available. Care should be taken to install the device behind the carburetor rather than in direct line with the air blast from fan or radiator, as this may keep it too cool to operate properly.

A 1957 Chevrolet six-cylinder station wagon, used by a salesman and subjected to a lot of hot engine starting, was equipped with a Carb-Airator. This engine required a lot of cranking after it was allowed to sit for 15 to 30 minutes, especially in the hot

desert areas on the salesman's route. Idling was rough after a hard drive as things got pretty hot under the hood with temperatures near the 100° mark.

Following the instructions, the engine was allowed to warm up with the hood closed. Observation showed that when the engine temperature reached the point where previous



rough idling had occurred, the tiny air bleed valve was open due to the underhood heat operating the bi-metal strip on the valve. While the manufacturer states that these units are pre-set, the test unit required a slight reduction of air bleed by the adjusting screw to achieve smooth idling.

The main disadvantage of Carb-Airator is that it is impossible to easily fit it to all carburetors or manifolds, especially those whose only vacuum outlet is to spark control. Tapping this source changes the vacuum advance characteristics of the distributor. Drilling the intake manifold with a well greased drill to catch the chips, or making an adapter plate to fit under the carburetor is difficult but well worth the effort in preparing for next summer's hot weather driving. The units sell for \$3.25 and are available at General Motors dealers and automotive supply houses.

Dri-Powr additives clean and lubricate engines

THREE NEW AUTOMOTIVE ITEMS designed to internally clean gasoline engines and keep them clean are being produced by the Dri-Powr Co. of Azusa, Calif., manufacturers of additives and related products. A rapid crankcase-cleaning solution called Dee-Gumm, an oil additive to maintain clean bearing surfaces and hydraulic lifters, and a gasoline additive to clean high speed and idle jets are the new Dri-Powr products.

Most rapid cleaning solutions do a rather superficial job, as evidenced by a recent experience MOTOR TREND had in preparing a car for tests of a new oil. We ran a flushing oil in the crankcase for one hour and then drained it, getting a pretty good mess of brown varnish floating on the top of our drainings. We filled with a good grade of 30 weight oil and ran the engine for 30 minutes, noting that the oil on the dipstick was like new. While the engine was running, a can of Dri-Powr Dee-Gumm was added and the engine kept running for another half-hour. Repeated checks of the

dipstick showed our new oil was getting dirty fast. Draining while hot revealed more dissolved brown varnish than we had even hoped for on the first flush, proving pretty conclusively to us that this product does what the manufacturer claims—really cleans.

A 1955 Dodge V8, that had not been driven as much as the average car, as evidenced by the 30,000 miles on the odometer, had valve noise and a rough idle. This was despite the fact that the plugs had been cleaned and regapped and the points and condenser changed. Dri-Powr for oil was added to the crankcase. A small amount of Dri-Powr for gas was poured into the carburetor while the engine was running; the rest of the can was added to a near-full tank of fuel. It took about two days of driving around town before the effects of the additives became noticeable in smoother idling without adjustment and quieter engine operation. One lifter that clattered on cold starts and never did get real quiet when the engine warmed up is now quiet even when cold.

These new products are being marketed through leading service stations and garages. Dri-Powr for gas or oil is \$1.50 per pint, and the Dee-Gumm sells for \$1.75 a quart. Smaller four-ounce doses of the gasoline additive are available for 40c.

One of a series of technical bulletins from

CITROËN

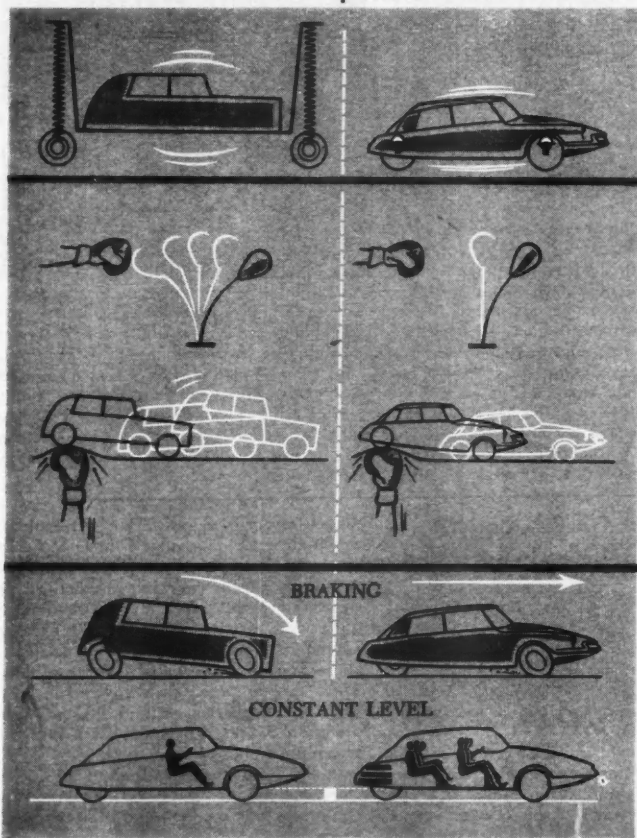
Air-Oil Suspension

For the first time anywhere, in May 1954, Citroen adapted Hydropneumatic (Air-Oil) Suspension to a production car. This revolutionary suspension is now standard equipment on both the Citroen DS 19 and ID 19 models.



ORDINARY SPRING SUSPENSION

CITROEN AIR-OIL SUSPENSION



CUSHIONING EFFECT

A conventional suspension would require a ten-fold flexibility to begin to compare with the gentle cushioning effect of Citroen Air-Oil Suspension.

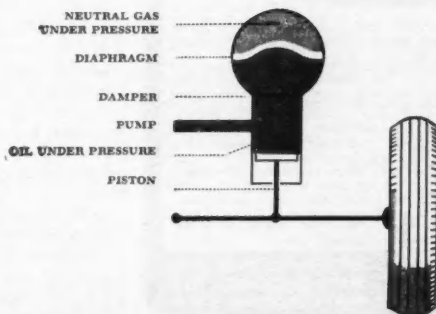
DAMPENING ACTION

A damper element is incorporated in each hydropneumatic unit. Integrated in the suspension system, this damper element has the added advantage of never needing adjustment. Because of its concept, adapted to the Hydropneumatic System, it acts instantaneously and renders the suspension practically aperiodic.

CONSTANT LEVEL

Ordinary cars nose-dive upon braking. Citroen's automatic level-compensators keep the car horizontal at all times, even upon sudden braking. Moreover, the car is kept at a constant height regardless of the load that is carried. In case of bad road conditions, moving a small lever will automatically raise the car to a higher position.

In the Hydropneumatic System, each of the four independently suspended wheels is connected to the body by a Piston. By means of a liaison liquid, this piston more or less compresses a neutral gas (Air) pressurized in a sphere. The liaison liquid maintained under pressure by a pump, automatically assures the dampening action and level corrections.



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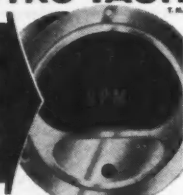
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PRODUCT USE TESTS

continued

Hurst-Campbell guards bolt on easily, give VW protection

METROPOLITAN CITY TRAFFIC today requires bumper protection of the highest order—something which will resist the efforts of those drivers who still insist on parking by ear.

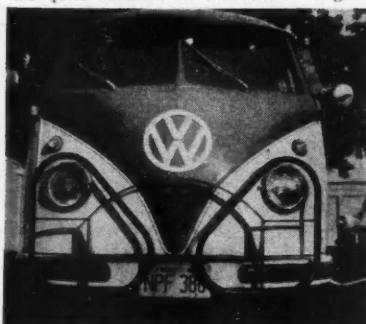
Most American cars are adequately shielded, but quite the opposite is true of imported marques. That is why we were quick to install a set of Hurst-Campbell guards on a MT staff member's Volkswagen Microbus. The Micro looks a lot sturdier than it is and this particular vehicle, a year old, has taken its share of parking accidents, including one severe blow while parked at the curb.

The guards, which give high protection in front and a wrap-around bar at the rear, can be installed by any novice in three or four hours, providing he follows the illustrated instructions carefully and in sequence. All that is required for installation are hand tools, and a 1 1/2-inch drill. This is needed for six small holes in the sides of the Micro, where the wrap-arounds fasten. What pleased us especially during the installation was the way in which everything fit. This kit has been carefully engineered and it works.

Members which take the strain are tied into the point where the front axle joins the frame and where the rear bumper brackets bolt into the chassis. The net result is sturdy;

there is no feeling that these guards will come off second-best.

We haven't been able to really "test" the guards yet except to determine where domestic bumpers will meet them. An effort was made to drive the Micro into the parking lot wall at a modest speed before and after the guard installation, but the owner was quite adamant in his refusal to grant



permission. We can only say that these are well made, rugged, give excellent protection and would cost a great deal more than their \$84.50 price if ordered custom made. Available from Hurst-Campbell, Inc., 1511 Old York Rd., Abington, Pa., they are highly recommended for anyone who owns any of the Volkswagen Transporter line. A slightly modified design has been worked out for '59 transporters.

Speed-Sport Oil for modern engines was Speedway tested

THE D-A LUBRICANT CO., INC., of Indianapolis, have been specialists in oils and greases for heavy industrial machinery for many years. Recently they have turned their research facilities over to developing a special automotive oil for modern high-speed, high-performance engines.

D-A Speed-Sport Oil is the result of long laboratory development and several years of testing in Championship racing cars. The company claims, as a result of their racing car tests, that they have in Speed-Sport Oil all the advantages of racing castor with none of its disadvantages. They also claim the oil contains no detergents, yet is so free of varnish-forming by-products that it can be used with hydraulic lifters without their clogging or sticking.

They make no other claims except that their oil is a good oily oil, has petroleum base, contains foam and high temperature oxidation inhibitors, retains a high viscosity index without additives, and provides maximum film strength under severe conditions.

MOTOR TREND's tests of products of this type are not laboratory analyses, but rather... do they work according to claims? A Mercedes 190-S with 56,000 miles was using a pint of oil between 1500-mile oil changes. This car is driven nearly 700 miles a week several months of the year, and the oil is

changed every two weeks. We were able to go through one oil change with D-A Speed-Sport Oil, 30 weight, during the last of the very hot weather, and while the drained oil was very dirty looking, it did not require the usual pint between changes. The second 1500-mile drain was much cleaner looking and again did not need that extra pint. There was no noticeable change in the performance of the car, but lack of oil consumption is one indication that it was not blowing out the breather.

A 1957 Porsche 1600 coupe that, due to daily city driving, needs the blowing-out it gets on weekends, is now on its second crankcaseful of D-A oil. Oil is changed in this car every 900 to 1000 miles because of frequent cold starts and city driving. We noticed since using this lubricant that the engine retained its liveliness longer after the weekly blow-out.

One of our friends whose Buick has erupted with hydraulic lifter noise unless he uses a "certain kind" of oil was ready to sever friendly relations with us when informed that he was going to road test an oil for us. He has since buried the hatchet and exhausted our test supply of D-A oil by insisting that he try a second crankcaseful just to be sure that his still-quiet lifters are not just luck.

D-A Speed-Sport Oil is available in SAE grades 10, 20, 30, 40 and 50 from independent service stations and some speed shops. It retails for 65¢ a quart.

SELL 'N' SWAP

Requirements are: copy limit of 25 words (not including name and address); list come, list served; we reserve the right to edit where necessary; we are not responsible for accuracy of description, although we will reject any misleading statements. This service is not open to commercial advertisers. No ads will be accepted if payment is not made in advance, and such communications will not be acknowledged. Only one car may be listed in any single Sell 'N' Swap insertion. This limitation will not apply to parts, catalogs, etc. The charge is \$4 per insertion. If your car is unusual and you have a photo of it suitable for publication, you may submit it with your ad. If we decide to print it there's no cost to you for the cut, but we'll have to decide which photos to use. Sorry, no photos can be returned—Editor

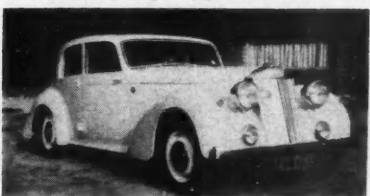
SELL

'57 THUNDERBIRD, with 245-hp engine, Fordomatic transmission, r. & h. Exc. cond.; 13,000 mi. \$2995 or best offer. C. W. Dreter, R.R. #1, Davenport, Iowa.

'46 LINCOLN CONTINENTAL conv. with orig. V-12 engine, orig. owner; immac., in good cond. Best offer. Frank Ross, 159 N. State Dr., Beverly Hills, Calif. Phone HOLLYWOOD 7-9095.

'58 MERCEDES-BENZ 300-SL Roadster. Red, with beige leather; 850 mi. \$7150, f.o.b. Milano. Also '56 Delahaye 4.5-liter sedan, \$1950 f.o.b. Paris. V. A. Corradini, 131 Via Gallarate, Milano, Italy. CADILLAC PARTS—2 rear springs, 2 front coil springs, 2 front & rear shocks, front & rear inner & outer wheel bearings & universal joints. All in good cond. Fit all Cadillacs from 1941-48. \$35. A. Ward Shanen, 2444 S. Orkney St., Philadelphia 48, Pa.

TWO FIRESTONE & U.S. tires—5.50 x 17—like new, \$10 each. Also 2 tubes to fit same—like new, \$2.50 each; & 1 3/4 Ford wire wheel, \$5. A. Ward Shanen, 2444 S. Orkney St., Philadelphia 48, Pa. '49 INVICITA (Black Prince), with Meadows 3-liter, 3-carburetor engine, Jaguar stick shift, torsion



bar suspension. Exc. cond.; 7000 mi. \$2500. Frank Bray, Rt. 9, Box 220, Carmel, Calif.

1000 BOOKS on Classic & Antique Cars, Automobile Engineering, Motor Racing; Owners Handbooks & Factory Shop Manuals. Catalog 25c. Vivian Gray, The Motorist's Bookseller, Hurstpierpoint, Sussex, England.

MODERN STEAM CARS—Magazine describes super-efficient 1958 American steam automobile, also classic Dobles. Only \$3 for a year's supply. Dollar bills accepted, no coins. Light Steam Power, Kirk Michael, Isle of Man, U. K.

STEAM CAR POWER UNIT—complete engineer's plans of steam unit for light car—switch-on start. \$4.25. Castings, machined components. Dollar bills accepted, no coins. Light Steam Power, Kirk Michael, Isle of Man, U. K.

'41 BUICK Custom Limited 4-dr. sed. Orig. factory jet-black finish, 6-ply ww's. Engine perf. Immac. in every detail. \$775. James E. Kellogg, 1524 Center, Pekin, Ill.

CLASSIC & ANTIQUE CAR Sales Catalogs: Packard, Chrysler, Lincoln, Cadillac, Pierce-Arrow, Buick, Orphan & Foreign cars; minimum \$5 each. Also Motor (N.Y.) Annual Numbers. Details for large, stamped, addressed envelope. A. E. Twohy, 400 N. Kenmore, Los Angeles.

'51 MUNTZ JET conv. cpe. Lincoln engine with



Hydra-Matic. Good cond.; only 35,000 mi. Best offer takes. Bill Moser, R.F.D. 4, Danese, Ohio.

ANTIQUE & CLASSIC car manuals, pictures, parts, restorations, old car ads, info., history specifications. Send 25c for list. Stanley Edelstein, Pres., Antique & Classic Car Club, 3619 Bedford Ave., Brooklyn 10, N. Y.

BEST OFFERS TAKE: '32 Chrysler LeBaron phaeton, exc. cond.; '37 Bohman & Schwartz town car, fully restored; '26 Hispano-Suiza rdstr., partially restored; '36 Lincoln custom-built conv. Robert J. Gottlieb, 629 S. Hill St., Los Angeles 14.

'41 LINCOLN CONTINENTAL conv., with '48 V-12 low-mileage engine. Sarasota white, with inte-

rior reupholstered in black art leather; good top, \$1000 or best offer. Bob Erdmann, Box 168, Osage, Iowa.

MOTOR (N.Y.) Annual Show numbers, orig. magazine ads & color prints of all classics, both U.S. & European. Some catalogs. State your wants. Complete listing 25c. Sheldon J. Lewis, 61-33 213th St., Bayside, L. I., N. Y.

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REDI-WARM automatic engine starters. Enjoy summer starting all winter long. Complete kits with all fittings & instructions. Brand-new, in orig. cartons. \$25, postpaid & insured. A. Ward Shanen, 2444 S. Orkney St., Philadelphia 48, Pa.

'38 PACKARD-DARRIN custom de Ville conv.—Cadillac-powered. \$5000 invested 2 yrs. ago; received



much national publicity. Mint cond.; must see to appreciate. \$2200. Stan Kordek, 908 Monroe St., Mendota, Ill.

'42 LINCOLN CONTINENTAL conv. Rare, restored, orig.—nylon top, Naugahyde interior, gold dash. Recently hauled V-12 engine & o.d. \$1500 or better offer. A. L. Ries, 809 Tyler Ct., Greenacres, Annapolis, Md. Phone CO 3-7809.

'35 AUBURN phaeton, with '49 Cadillac engine. New nylon top, new ww's, new leather uph. Body perf.; exc. running cond. \$750—no less. Donald R. Collins, 3318 N. MacGregor Dr., Houston 4, Tex. '34 ROLLS-ROYCE Phantom II 7-pass. limousine. Body & chassis in exc. cond. Orig. mileage 30,000; in storage for many yrs. \$2200. Harry Hewitt, 30 Virginia Rd., Syosset, L. I., N. Y.

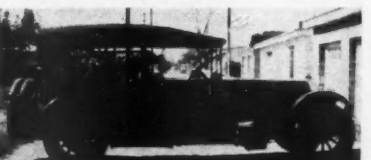
'41 CADILLAC conv. with o.d., suitable for restoration. For spare parts another '41 Cad. conv., identical except for Hydra-Matic transmission. Best offer takes both. Loring B. Smith, 8911 Phoenix, N. E. Albuquerque, N. M.

'24 DODGE touring. New top & paint, good tires & good running cond. \$500. Aaron Inger, Rt. 1, Marion, Iowa. Phone DR 7-0976.

EXCELSIOR motorcycle engine in running order. Very early model—2 cyl., overhead valves. Best offer over \$100. D. R. Blodgett, Box 1024, Peoria, Ill.

'31 STUTZ BLACKHAWK sed., with Weyman fabric body. Orig. & complete, with all instruments & manual. 49,000 mi.; runs well. Needs exterior restoration (paint, roof & chrome). Best offer over \$750. J. E. Daniel, 3694 Bathurst St., Toronto, Ontario, Canada.

'17 LOCOMOBILE Model 48 7-pass. touring. Restored, with new top & uph. Good tour car; will



drive anywhere. \$3500. Clyde Klinedinst, 1416 Orange St., York, Pa. Phone 43-4174.

'47-'48 LINCOLN CONTINENTAL hdp. 100% orig., like-new thruout. Power windows, o.d., ww's. Complete service records available. \$1795. Robert E. Karoly, 1204 N. E. 4th Ave., Fort Lauderdale, Fla.

'39 PACKARD classic 12-cyl. town car with Rollston alum. body, 6 tires, Black lacquer, chrome trim. Conv. front in leather, rear, broadcloth. A-1 cond. \$2000. C. S. Black, 111 Kovar St., Bogota, N. J.

BUTANE—Ensign combination gasoline-butane outfit. Complete with 32-gal. tank, carburetor, regulator & all fittings. Runs fine—will fit Chevy, Cad or B. Aikin, 9082 Marylee Dr., Garden Grove, Calif. Phone LE 9-6991.

'32 AUBURN 4-dr. sed. Good cond. thruout. First \$250 makes. Clifford Farkas, 332 S. 4th St., Mt. Vernon, Ill.

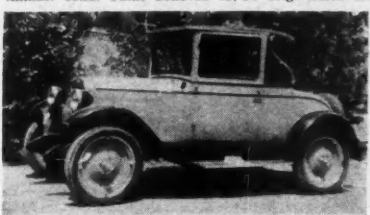
'31 PACKARD 8 4-dr., 7-pass. sed. Sidemounts, 4 forward speeds. F. C. Koening, 812 N. Lafayette Park Pl., Los Angeles 26. Phone DU 2-7887.

'51 CADILLAC 12-cyl. conv. rumbleseat cpe. Sidemounts, landau bows. Restored without regard to cost. Terrific performer. Selling well below investment. \$1800 firm; no trades. N. C. Johnson, M.D., 2059 Clinton Ave. Alameda, Calif.

'51 TALBOT LAGO Record sed. 4.5-liter Le Mans winning engine, beautiful red leather uph., sunroof. Mechanically good; bumpers poor. An extremely rare classic—only \$875. Alan Odendahl, Box 122, Tariffville, Conn. Phone OL 8-7504.

'31 DIAMOND T 1-ton truck with dual wheels. 8014 mi.; fine for hauling your antique car. Best offer. D. R. Blodgett, Box 1024, Peoria, Ill.

'27 CHEVROLET Model K cpe. 90% restored; in immac. cond. Paint believed to be orig. Extra set



of new tires included. Best offer over \$600. Kenneth R. Harbert, Rt. 2, Box 2427, Auburn, Calif.

'35 PACKARD 12 conv. cpe. Completely restored—engine, chassis, uph., top, tires & paint. Must sell—have found car I have been looking for for many yrs. \$3000. George Warner, 9740 Anza Ave., Inglewood, Calif. Phone OREGON 8-7505.

'48 LINCOLN CONTINENTAL cpe. with black finish, o.d. All orig. except for new '54 Cadillac engine installation. Exc. thruout. \$1800 or best offer. Art Fisher, 457 N. 13th St., Laramie, Wyo.

HUNDREDS OF AUTO ADS on over 75 different cars from 1917 to '37. Many in color. Send 15c for list. Roger Hampsmire, 909 Pratt, Barry, Ill.

ONE SET of genuine 15-inch wire wheels fitting all Chrysler products from '47 thru '56. Make offer. C. W. Gildenmeister, 419 N. West St., Bellevue, Ohio.

SELL OR SWAP

'33 AUBURN 4-dr. phaeton in exc. orig. cond. Needs little to be mint. New top, many spares. \$1000 firm, or good American sed. with automatic transmission. Bill DeCremmer, P.O. Box 413, Janesville, Wis.

'41 LINCOLN CONTINENTAL conv. with '54 Olds engine, new paint. Good cond. Sell or trade for slick '36 Ford rdstr. Consider other trades. N. D. Stevens, Box 115, West Ryer, N. H. Phone WFO 4-8566.

'30 PACKARD 4-dr. New chrome, tinted glass & black lacquer. Recently driven on 2000-mi. trip. \$750 or trade on up to \$1000 English car. H. H. McSweeney, 305 Lee St., Chickasaw, Ala. Phone HEMLOCK 8-3192.

'48 JAGUAR Mark IV 3.5-liter saloon—gray. Knock-offs, Cats Paw headlamps. Sell or trade for early '30s double-cowl restorable phaeton—any make.



Jessop Smith, 6875 Wilson Mills Rd., Gates Mills, Ohio. Phone HI 9-1498.

'58 PORSCHE 1600 Super cpe. Genuine leather—like-new thruout; 7300 actual mi. Best offer over \$3550. Will trade, in Southeast U.S. John G. Beverly, 214 W. 4th Ave., Tallahassee, Fla.

'48 LINCOLN CONTINENTAL cpe. in mint cond., with new V-12. White with chrome beading. Trade, together with '55 Thunderbird, for Continental Mark II or '58 T-Bird. Orig. owner. Michael P. Sadow, 290 Lee Ave., Yonkers, N. Y. Phone YONKERS 9-0766.

WANTED

CAST IRON HEADS for '33 Lincoln KA, alum. heads for '34-'40 Lincoln K, & headlight lenses for '37-'40 Lincoln K. R. A. Cardwell, 47 St. Paul's Pl., Hempstead, N. Y.

WINDSHIELD for rumbleseat, and trunk and trunk rack for '36 Cadillac Fleetwood conv. cpe. Also bumper step plate. Copy '38 Motor for other literature. Edwin W. Sims, 100 S. Colonial Dr., Hopewell, Va.

PARTS & MANUALS for each of the following: '31 Chrysler 6 cpe., '29 Oakland 6 & '39 supercharged Graham. Give prices. A. Fidanza, 27830 White Rd., Wickliffe, Ohio.

'36 FORD phaeton. Advise as to overall cond. & asking price. Send photo if possible. R. W. Maxwell, 844 S. Washington St., Hinsdale, Ill.

MANUALS (shop or owner's) books, motometers, radiator nameplates, old campaign buttons, lapel pins (anything with old cars on it). Highest prices paid. Stanley Edelstein, Pres., Antique & Classic Car Club, 3619 Bedford Ave., Brooklyn 10, N. Y.

'34 DE SOTO Airflow 4-dr. sed. Must be good enough to restore to orig. State price & include picture. H. J. Lindberg, 1019 E. 108th, Seattle, Wash.

AUTOMOBILE LITERATURE. Will pay highest average price in world for all makes—1900-'47 catalogs, circulars, emblems, manuals, truck literature. Big-car catalogs at premium. Lewis A. Mayer, Munnich, Mich.

PAYING HIGHEST PRICES for orig. catalogs, folders & brochures of the classics (big cars) both U.S. & foreign. Also Motor (N.Y.) Annual Show numbers. State offerings, asking price & cond. Sheldon J. Lewis, 61-33 213th St., Bayside, L. I., N. Y.

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ESCAPE ROAD

Edited by
Erwin Rosen



"O Sole Mio . . ."

WRY, BUT NOT DRY—British humor took a pleasing twist in this effective copy for an advertisement in *The Motor*:

"You push button, door opens. Hurry must. Slam therefore. Starter. Whoosh. Some getaway. Door shut. No rattle. Safe.

"Remember old car once? Which? Nineteen-when. Snappy. What engine! Brass knobs. All admire. But locks, doors! . . . Rattle rattle. Squeak squeak click. Rich aunt. Sharp corner. Door opens. Aunt on road. Undignified. Doctor. Lawyer. Cut out of will. Unfortunate. Very.

"Never again now. W-B make locks—rotary, cam-latching, Zero-Torque. Make handles, pushbuttons. For cars and. Safe safer safest. Last word . . ."

BEEES ARE FOR THE BIRDS—Two California trucks, one loaded with hives filled with bees, collided. A buzzing pandemonium followed. The bees attacked the drivers, the policemen who came to the scene, the photographers from the local newspapers. Finally bee men arrived, and calmed the bees in short order. Calming the drivers, policemen and photographers—who were making stinging remarks—took longer.

EYE OPENER—An optical company reports that it takes a fifth of a second to blink, and that an average person may blink 25 times a minute. At this rate, if you average 50 miles an hour on a 10-hour trip, you have traveled 41 miles with your eyes closed.

(If possible, try to pick a spot where these 41 miles are in a straight line—with no other cars on the road!)



"Just tie my shoe lace, please."

SOBERING SERMON—A church in New Castle, Ind. displays this large sign on its front lawn: "Two kinds of finishes for automobiles—lacquer and liquor."



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There's nothing quite like sitting behind the prize-winning Adventurer engine. Performance is truly sensational! And now this engine is optional on any De Soto.

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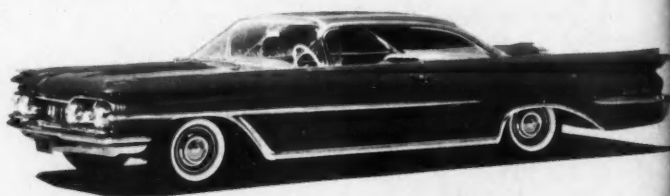
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The smart way to go places... DE SOTO



MT WORLD SHOW ISSUE!



Distance = 258.36 Miles ■ Highest Point = 7901 Ft.

Mobil



IMPORTS PROVE A POINT..



Mileage Rally was stymied along a mountain road by a forest fire which delayed all entrants and did little to aid their fuel economy.

Total of 32 finishers found their way to Los Angeles' Ambassador Hotel at end of event. Two entrants ran out of gas; one had accident.



IMPORTED CAR OWNERS are sometimes challenged by skeptics about the economy of their autos. Now the imports have had a chance to prove what they can do—officially and under controlled conditions in the 1958 Mobil Mileage Rally.

There were 32 finishers, representing virtually the entire range of imported cars sold in the United States, for the seven-hour run on Sunday, Oct. 19. Their amazing overall average, 33.48 miles per gallon, was recorded despite unscheduled hazards such as a forest fire that turned the tough Southern California course into a 258-mile route of thrills more like a road race than an attempt at economy.

Top score, an astounding 50.5 miles per gallon, was rolled up by John Rich of Burbank at the wheel of the little Fiat 750—an Abarth factory conversion of the standard 600 sedan. Close behind was the BMW Isetta 600, which Dale Alexander toolied over the course to the tune of 48.7 miles per gallon. They ran one-two in Class A, the competition for cars with engines of less than 750 cubic centimeters total piston displacement.

While the rally was restricted to four-passenger "family" cars, it was the entries shading toward the sportscar class that produced the biggest surprise. They gave the economy models a hard run for their gasoline money and, in one division, even drove off with the victory trophy. That winner was Jim Parkinson's speedy Alfa Romeo Sprint Coupe. Its 33.4 mpg topped all others in Class C (engines of 1100 through 1499cc), edging out Al Harmon's Volkswagen by a hair-breadth 0.1 mpg.

In the "big car" Class D competition (over 1500cc) the cat-footed Porsche 1600, driven by Mary Davis of sportscar racing fame, scored 35.3 mpg to finish a close second behind Lee Hamer's Volvo. The Swedish import's winning mark was 36.1 mpg.

In Class B (750 through 1099cc) Bill Likes coaxed a Renault Dauphine to a winning score of 43.4 mpg.

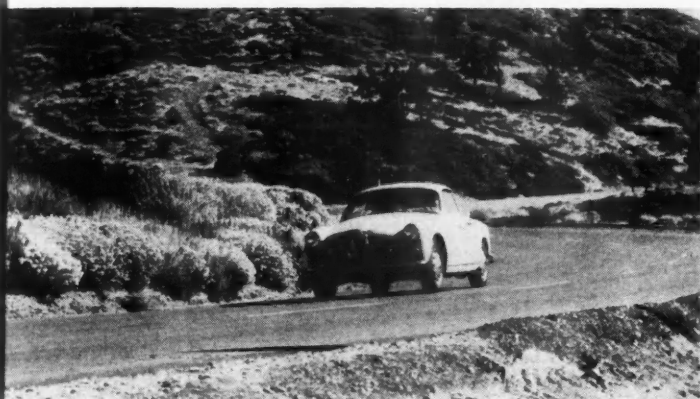
Five of the 37 original entries were out of competition at the finish. Two drivers misjudged the route, on which they encountered every possible driving test, from dense city traffic to rugged mountain grades as high as 7901 feet, and consequently ran out of gas. An accident disabled one car and another was disqualified for straying off the route. One driver failed to show up.

Sponsored by General Petroleum Corp., the Mileage Rally was sanctioned and conducted by the United States Auto Club. All cars competing were required to be four-passenger stock models of foreign manufacture regularly sold in the United States.



ENTRIES THOROUGHLY COVERED IMPORT FIELD, INCLUDING A ROLLS-ROYCE, HARDLY BUILT FOR ECONOMY, AND GERMAN FORD TAUNUS.

Economy



Sportscars did well. Alfa Romeo Giulietta Sprint coupe got amazing 33.4 mpg.

Overall winner at 50.5 mpg was Abarth-Fiat 750 derived from standard 600.



RESULTS

MPG	Place	Car
CLASS A (Under 750cc)		
50.5	1	Fiat 750
48.7	2	BMW Isetta 600
42.9	3	Citroen 2CV
41.0	4	Renault 4 CV
40.2	5	Goggomobil
39.8	6	Fiat 600
Out of gas		Fiat 500
Accident		Lloyd

AVERAGE MPG CLASS A—43.9

CLASS B (750 through 1099cc)		
43.4	1	Renault Dauphine
41.6	2	Dyna Panhard
37.8	3	Triumph
37.4	4	Fiat 1100
35.0	5	DKW
34.9	6	Morris Minor 1000
31.5	7	Skoda
27.5	8	Goliath 1100
Off course		Datsun 1000

AVERAGE MPG CLASS B—36.1

CLASS C (1100 through 1499cc)		
33.4	1	Alfa Romeo Sprint Coupe
33.3	2	Volkswagen
32.1	3	Simca Elysee
30.6	4	Austin A-55
29.6	5	Sunbeam Rapier
28.3	6	Borgward Isabella
27.85	7	Anglia
27.82	8	Peugeot 403
26.5	9	Toyopet Crown
Out of gas		Hillman Minx
Did not start		Opel

AVERAGE MPG CLASS C—29.9

CLASS D (Over 1500cc)		
36.1	1	Volvo
35.4	2	Porsche 1600
30.8	3	Consul
30.5	4	Vauxhall
29.4	5	Citroen ID-19
27.9	6	Taunus
26.2	7	Jaguar
21.4	8	Mercedes Benz 219
14.2	9	Rolls-Royce

AVERAGE MPG CLASS D—29.1 AVERAGE MPG ALL CARS—33.5

GOLIATH 1100 COUPE

a tame little tiger with a wild little growl

by Steve DaCosta

ONE OF THE PLEASURES of driving a small car comes from the feeling of compactness and maneuverability that is lacking in large machines. After driving the Goliath 1100 Tiger coupe it is strikingly evident that here is a car which has, in addition to these features, most of the agility usually connected with a small sportscar. This German auto should appeal to those who like performance tempered with a certain amount of austerity. Certainly the Goliath, with its simple, attractive lines suggesting the Borgward Isabella, could pass almost unnoticed. (Slight design modifications have been incorporated into the new Goliath Hansa 1100 coupe, available later this year and essentially the

same as the Tiger we tested. A photo and description will be found in this month's Gran Turismo show section.)

Heart of the machine is the Tiger engine, which develops 63 bhp at 5000 rpm, a 17-hp increase over the engine as installed in the sedan. Part of the power increase in the water-cooled flat four can be attributed to the compression ratio, raised from 7.3 to 7.9, and the use of two, Solex carburetors instead of one. Oversquare bore and stroke remain the same (2.91 by 2.52 inches) for a total displacement of 67 cubic inches (1094cc). An auxiliary oil cooler has been added to the Tiger engine, apparently in anticipation of increased operating temperatures at higher

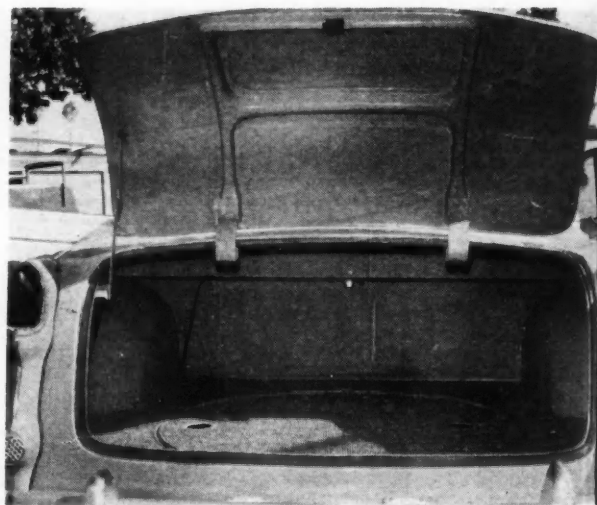
engine speeds of which the coupe is capable.

The Tiger kicks up quite a storm in second gear, its best accelerating ratio. We found that practical limits in gears, at which the car ceases to accelerate, were 21 mph in first, 40 in second, and 62 in third. Passing speeds, using the limit in each gear, are 8.8 seconds from 30 to 50 mph and nine seconds from 45 to 60 mph.

Acceleration times and passing speeds are slowed somewhat by the column-mounted shift; putting the lever on the floor would be a vast improvement. It will not accept fast shifts. What is worse, great care must be exercised in reaching for first. The reverse gate is almost imperceptible and in the



Rear styling shows quiet good taste, features good visibility and has only barest suggestion of fins from added tail light shrouds.



Spacious trunk has upholstered floor with spare tire and tools beneath circular cutout for maximum flat unobstructed luggage area.



PHOTOS BY E. PAT BROLIER, GUNTHER MOLTER

same relative position as first—a situation which can prove embarrassing. The four forward gears are all synchro, a feature usually associated with more expensive autos.

Standing start acceleration times, while not remarkable, are more than adequate to keep up with traffic. Zero to 45 mph averaged 11.4 seconds, while elapsed time to 60 mph totaled 19.9 seconds. Time in the quarter-mile was 21.3 seconds with a speed of 60.7 mph. Factory-rated maximum speed is a healthy 90 mph.

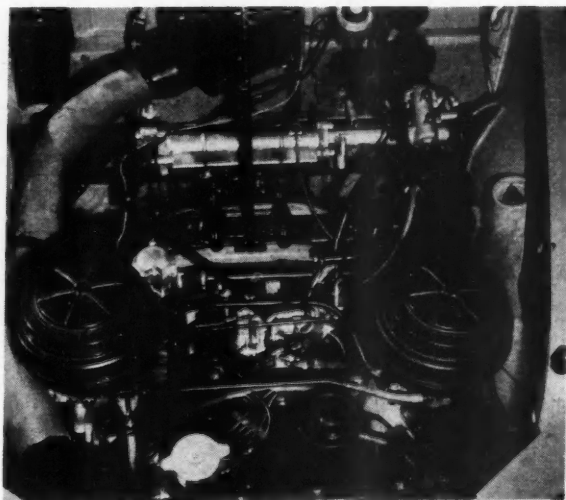
As might be expected, braking and handling on the Tiger are excellent. There is some characteristic wheel kickback from the front-wheel drive when cornering under

power, not objectionable when it is understood. Brakes withstood our standard 10 stops at 15 feet per second per second deceleration from 50 mph without squeal, fade or overheating. Although the Tiger was perfectly willing to take more braking, our experience has shown that the strain of added stops is useful only when checking the brakes on competition cars or machines much heavier than the Tiger's 1975 pounds.

Seating in fully reclining bucket seats upholstered in a leather-grained plastic is definitely on the luxury side. The steering wheel, in a near-vertical position, lends itself to the popular arms-out competition driving position or any desired closer spot. There is an

occasional bench-seat in the rear. In the interests of testing we placed (under protest) two adult males from the MT staff in the back seat and made a short city drive. Aside from lack of headroom, practically no space for legs and a rear seat radio speaker which temporarily deafened one of the editors, it wasn't too bad. A more functional use for the seat is for children, dogs or packages.

Finish and detailing inside and out are strictly quality as befits a \$2835 p.o.e. price tag. The car fills a definite price gap in the small luxury coupe class and its limited production should find a ready market here in the West. Let's sum up by saying that the Tiger has a feline grace we like.



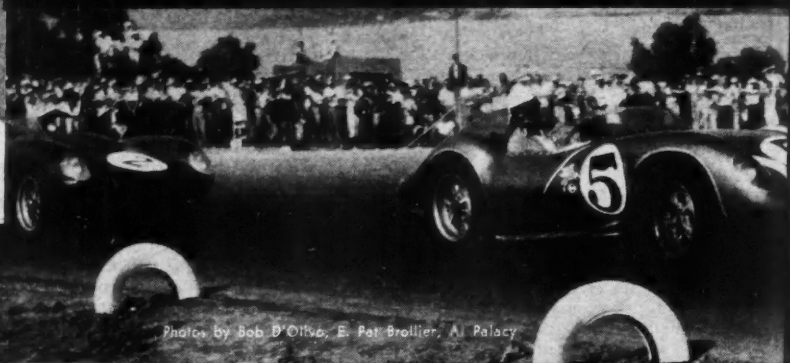
Flat opposed four-cylinder Tiger engine has dual carbs, develops brisk 63 hp at 5000 rpm. Docile in traffic, it accelerates freely.



Tiger seats give good support, adjust to any position including full recline. Near-vertical wheel, suspended pedals are well placed.

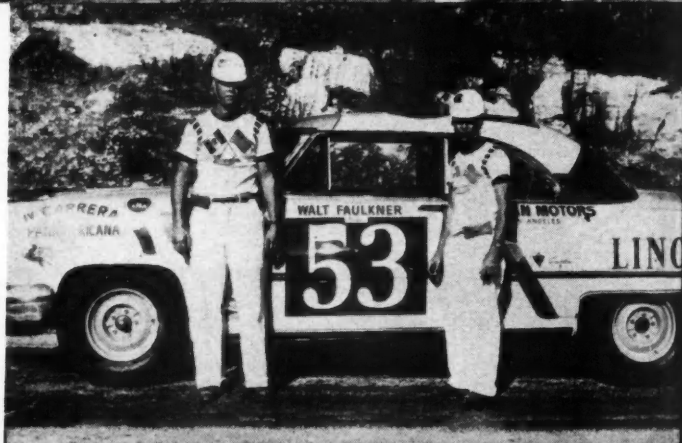


A top mechanic, Chuck Daigh started racing sportscars because he thought it would make him a better co-driver in the Mexican Road Race. His driving skill has made him a winning stock car driver, a record setter at Daytona Beach, and now, one of the leading sportscar drivers in America.



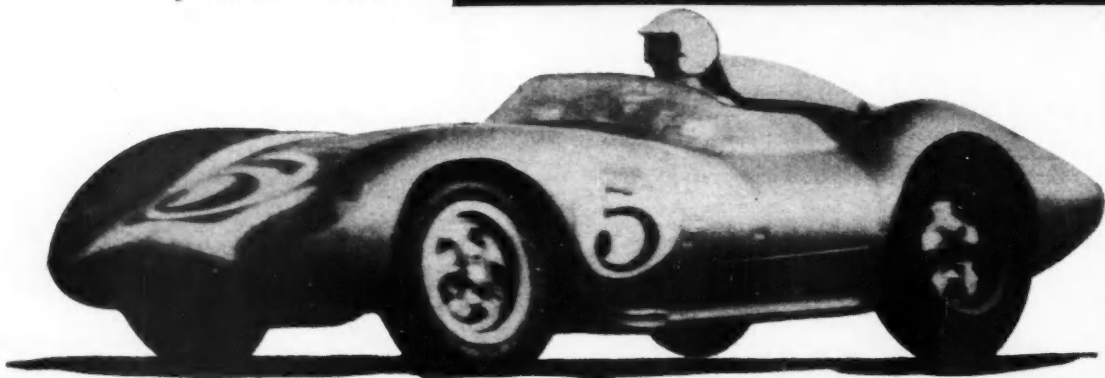
THE UNITED STATES GRAND PRIX for sportscars at Riverside, Calif. in October, 1958, looked like anybody's race. This first big West Coast professional event boasted the greatest array of driving talent west of Sebring: Hill, Behra, Bonnier, Balchowsky, Shelby, Gregory, Kessler, Krause, Ruttman, Salvadori, Crawford, Drake, Oker, Unser, Lovely, Gurney, Miles, Pollack, Reventlow, von Neumann, Ginther, Ward, Rathmann, Weiss, Parsons—and some two dozen more. Among them was the pride of Long Beach, Chuck Daigh, tooling a potent new Corvette-powered Scarab for Lance Reventlow. When the checkered flag fell on Sunday's main it was Daigh's blue Scarab under the wire, outright winner of the historic 200-mile road race. Among the other assembled aces only Phil Hill, in a factory-fresh 4.1 Ferrari, had given Daigh any trouble—and Hill's car had failed to finish the punishing contest.

continued on facing page



chuck DAIGH

by William F. Nolan



"Phil was driving beautifully—and very fairly," states Daigh. "We passed and re-passed several times in those early laps before his Ferrari went sour. In fact, on one particular turn, we swapped positions three times. I was a little worried about the Scarab handling properly for the first four or five laps, as she was carrying a double fuel load—60 gallons instead of the usual 30—but the larger tank didn't bother me much. We gambled on not having to go in for a pit stop, and just made it. I had only enough gas left for maybe two more laps when I got the checker. Then, too, a broken line knocked out the rear brakes and in the final part of the race I was simply gearing down for the turns. Thought for a while I'd have to retire the car, but she held for me."

WINNING IN A REVENTLOW SCARAB was not a new experience for Daigh. In his four other weekend outings with this car in 1958 he won the Saturday race at Minden, won the Sunday main at Montgomery, another Saturday event at Thompson and all three races he entered, including the main, at Meadowdale!

"The longer the course the better off we are," he states. "The Scarab is all but unbeatable on the longer circuits, and handles best on high-speed corners. But she's got plenty of torque out of the tight ones."

Daigh went to work for Reventlow in mid-1957, when Lance first set up Operation Scarab, and has been on the project ever since. "We're working on a trio of Formula 1 machines for Europe right now," he says, "and we hope to have them over there sometime in '59."

Directly after Riverside Daigh competed in a stock car race at the new Meadowdale road circuit, near Chicago. He drove a 1958 Ford and finished third overall behind Fred Lorenzen and Jimmy Bryan.

"I should have won that dice," he says, "but I goofed. I'd already made my second pit stop and was all set to move into the lead when Lorenzen pitted. Then I overdid things in the esses and rode up a dirt bank. The car was wedged on the bank, with the inside rear wheel about five feet off the ground. Some of the spectators jumped over the fence to help get me back on course, and I managed to salvage third. Bryan had passed me while I was sitting up on the dirt."

DAIGH LIKES TO DRIVE an occasional stock event, and feels that the big cars can be "herded" into turning some pretty swift lap times. "At Meadowdale I set the track record at 2:13 in the Scarab, then came within six seconds of that time with the Ford—but I had to work a lot harder to do it. When I drove the stocker like I drove the Scarab I was 15 seconds a lap off. Then I began to really *push*, going a lot deeper into the corners and pitching the Ford sideways to help the brakes slow it enough to get through."

During the summer of 1957, Daigh competed in three stock car events at the Milwaukee State Fairgrounds. He drove a new '57 Ford in these and got a sixth, a second and (after setting the fastest qualifying lap time) did not finish the final contest, due to a broken piston.

DAIGH, NOW A FAMILY MAN OF 35 with a wife and two children, was born in Long Beach, Calif., in November, 1923. His father

was owner-operator of a garage in that city and young Chuck was weaned on socket wrenches and axle grease. He was helping the elder Daigh from the time he was able to toddle into the garage.

"When I was 15 Dad bought an old Model A that had been wrecked. He gave it to me for my birthday, but told me not to drive it until I was 16 and could get a license. He didn't have to warn me; that old, beat-up tub was in no condition to operate anyhow."

Chuck spent the next 12 months rebuilding and "hopping up" the A, between sessions at Clearwater Junior High. For the following three years he "buzzed around Long Beach in the A," then entered the Army and became a paratrooper.

"After getting out, in September, 1945, I went back to work for Dad," relates Daigh, "and, in my spare time, built up a dragster. It was a '29 Ford, with a '32 frame and a Merc engine—with all the goodies. I got a top of 134 mph for the flying mile in that machine."

During the 1947-48 period, with his brother Harold, Daigh held the record at El Mirage for the flying mile, for both roadsters and coupes, competing against boys like Jack McAfee. ("First we fixed up a T-roadster, then switched to a coupe for two seasons.")

Chuck began spending more and more of his time around Clay Smith's garage in Long Beach, and eventually worked with Clay and Bill Stroppe in preparing a team of production Lincolns for the Mexican Road Race.

"I was co-pilot with Walt Faulkner in '52 and '53 down there," he says, "though I didn't drive either year. My job was to help Walt in case of trouble and to advise him as to speed and so on. And that first year I was no good to him at all. In fact, it was because I thought I'd be of much greater value as a co-pilot in '53 that I decided to enter a few sportscar races and gain some actual competition experience."

DAIGH'S FIRST OUTING as a competing driver was at Santa Barbara early in 1953. His mount was a Jaguar XK-120 Special, and he recalls "finishing way back in the field."

He got a second overall at Terminal Island with the Jag, then switched to a Kurtis in 1954 (after gaining a second in class with Faulkner in Mexico). This car was fast—with a modified Lincoln engine under the hood—and Chuck won his first main with it at Willow Springs.

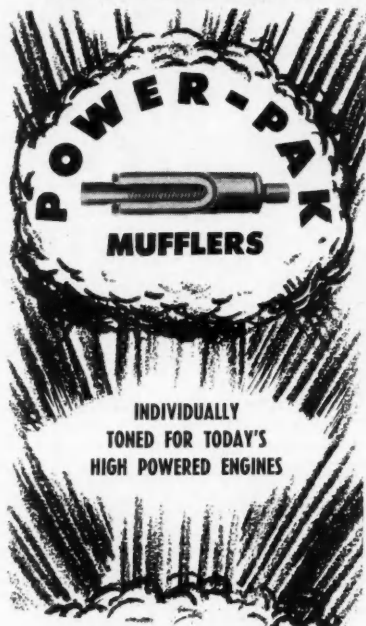
"In March of that year I handled a Monza Ferrari in the Sebring 12-hour go," he says. "I was co-driving with Sterling Edwards and we had engine trouble just past the halfway mark and retired. Up to then we were about in sixth position." (Prior to the race itself, during practice, Daigh had blistered around the famous airport circuit to record second fastest time of day—just behind Mike Hawthorn's factory D-type Jaguar. More than one track veteran expressed amazement at Daigh's immediate affinity for the tricky Ferrari, a car he had never before driven.)

He was back with the Kurtis-Merc at Santa Barbara that season and scored another victory, next taking a third with the same machine at Torrey Pines.

"Ken Miles won that race at Torrey in a hot new special designed and built by Dick Troutman and Tom Barnes," says Daigh.

continued

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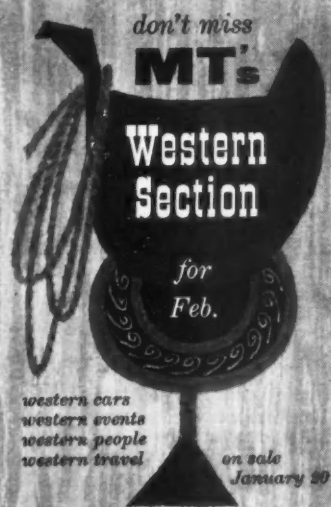
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chuck DAIGH

continued

"I fell in love with that rig the minute I saw it go. Naturally, when I was later asked to drive it, I was delighted."

OVER THE NEXT THREE YEARS the combination of Chuck Daigh and the Troutman-Barnes Special became a potent one. When Chuck took over the wheel the car was powered by a flathead Mercury engine, which delivered the power needed but was difficult to maintain mechanically. In five events during late '55 and through June of '56 Daigh took a pair of seconds, a pair of thirds and a fifth.

Meanwhile, Daigh had gone to work for Peter De Paolo of the Ford racing division and was helping set up company stock cars for various cross-country contests.

"At Daytona, during Speed Week in February, 1956, I won the sports class, both modified and production, for the standing mile with a pair of our Birds," says Daigh. "Turned 92.14 with the modified job, then 88.78 in the production car. I barely nosed out John Fitch's Corvette. John was then with Chevrolet, our direct competitor."

FORD DECIDED TO FIELD A PAIR of fully-modified Thunderbirds for the 1957 Sebring enduro and notified Daigh of their plans at the close of the '56 season. "It was all rush-rush," he said, "and I was appointed manager of their racing team. We were to give out two special Birds their shakedown runs at Daytona the month before Sebring."

Daigh and his crew set to work, burning the midnight oil in an all-out effort to meet the deadline. In addition to the pair of sports T-Birds he was responsible for some 47 other cars—a'l being readied for Speed Week at Daytona. Even the full staff of 100 workers found the job a handful.

"But we made it," says Daigh. "We showed up at the beach with all 49 cars, ready to go. The two sports-racing T-Birds were not in their final form. We had intended putting light aluminum bodies on them—since they were each a good 500 pounds too heavy—but just couldn't do this before Daytona. Yet they handled well in spite of the weight and were powered to move."

The larger of the two Birds had a 430-bhp, fuel-injection Lincoln engine installed—and this seven-liter bomb set the fastest time for the meet: 160.356 over the flying mile. And, in the Pure Oil Trophy Race, a 10-lapper for all sportscars, the other team Thunderbird finished second overall (driven by Marvin Panch), being beaten only by champion Carroll Shelby's fabulous 4.9 Ferrari.

"This was encouraging, of course," admits Daigh, "but even with the lighter bodies we knew we didn't stand a chance of taking an event like Sebring. And when Corvette came out about that time with news of the space-frame SS model for the race we knew it was useless to try and get our two cars ready. However, to their credit, I'll say this: they had potential and they could have gone well. Just how well is a question that can never be answered. The Detroit racing ban on factory participation killed the special Thunderbirds, just as it killed the SS Corvette, so it's impossible to say what might have been accomplished by Ford in the sportscar field."

WHILE WORKING AT FORD Daigh helped build up a modified T-Bird engine to replace the tired Mercury in the Troutman-Barnes Special, and with this powerplant installed, the car suddenly became a major contender in West Coast events. In March of '57, at snaking Paramount Ranch, Daigh lost first position to Jerry Austin's D-Jag by a split second, the two machines crossing the finish line almost wheel to wheel after a fierce battle. Then the combination clicked, and Daigh won three main events in a row with the car: Paramount Ranch in June, Pomona in July and Santa Barbara in August. (Of the Troutman-Barnes Special Daigh happily comments: "That was one of the sweetest-handling jobs I've ever driven. It was lighter and shorter than the Scarabs, and cornered absolutely flat with power to spare. When I wanted to go, it went!")

Before Daigh, Dick Troutman and Tom Barnes joined Warren Olson on a full-time basis on the Scarab project, they fielded the blunt-nosed white T-B Special a final time at Riverside in September, 1957. And it was a memorable race.

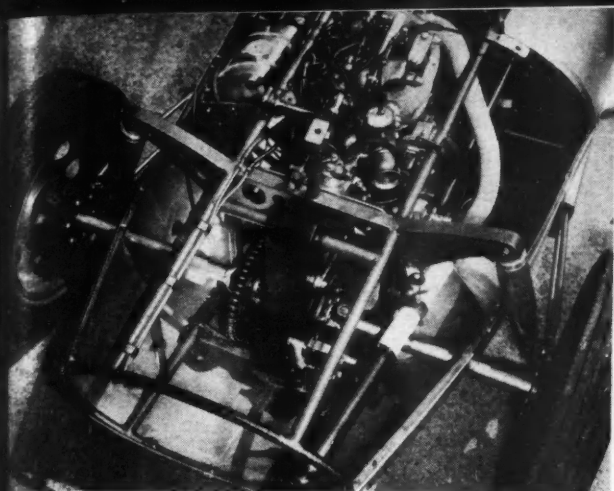
After handily winning the Saturday prelim with the car, Daigh lined up for the Sunday main, destined to be one of the most thrilling seasonal events on the Coast. For 10 laps it was Daigh vs. Pete Woods and his D-Jag, the two cars changing position constantly in what one reporter termed "a hair-raising game of high-speed tag." With this duel in progress tires suffered from the strain of hard cornering, and on lap 17 Daigh was forced into the pits with a flat. But Woods had retired on lap 13 with a broken oil line, so Chuck could still win the race if he could get the wheel changed in time. Frantically his pit crew replaced the bad tire and Daigh roared back into the fight.

"But I was black-flagged on the next tour," he says. "We had to use a recap on the car—since we were all out of new skins—and this disqualified me. Bad luck, because the Special was going very well that afternoon and seemed ideal for the circuit."

The machine was sold and Daigh turned his full attention to developing the Scarabs in Olson's garage in West Hollywood.

"I DID ALL THE ENGINE WORK on the first car and we had it ready for testing in just four months," states Daigh. "Now we've moved the operation to a somewhat larger place in Culver City, but Lance still employs only a dozen people. He feels, just as I do, that a handful of individuals working smoothly together without personal friction can do more and get it done faster than 10 times that number. Lance is not trying to cut corners with this project; he gives us a free hand with regard to parts and materials, but he insists on the job being done perfectly. And with a large group of people, many of them working at cross-purposes, perfection is an impossibility."

Daigh sees no immediate chance for the sports Scarab in Europe, but is convinced that he will be over there with Lance at the wheel of a Formula I Scarab before the '59 season is over. And, if indeed this is true, the businesslike, six-foot, 180-pounder from Long Beach may well be a serious threat on the Grand Prix scene. Because, as he proved so decisively at Riverside against an all-star field, Chuck Daigh in a Scarab is *not* an easy man to catch. *



Swing axles, suspended by motorcycle shock springs, are chain driven. Rear-mounted BSA Gold Star engine has 23-degree rear tilt to give better air path across fins.

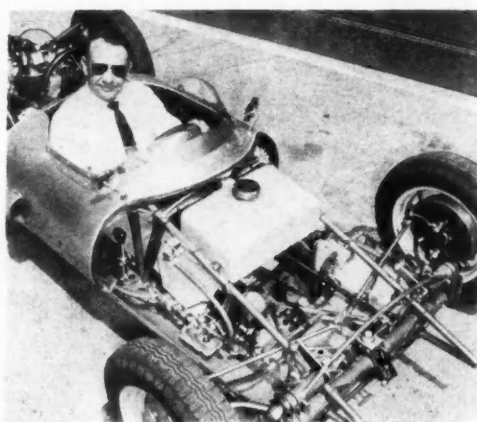


Oval opening in rear allows air exit and reduces wind drag. Engine-cooling air is ducted from scoops on the sides and chrome moly roll bar is housed in the headrest.

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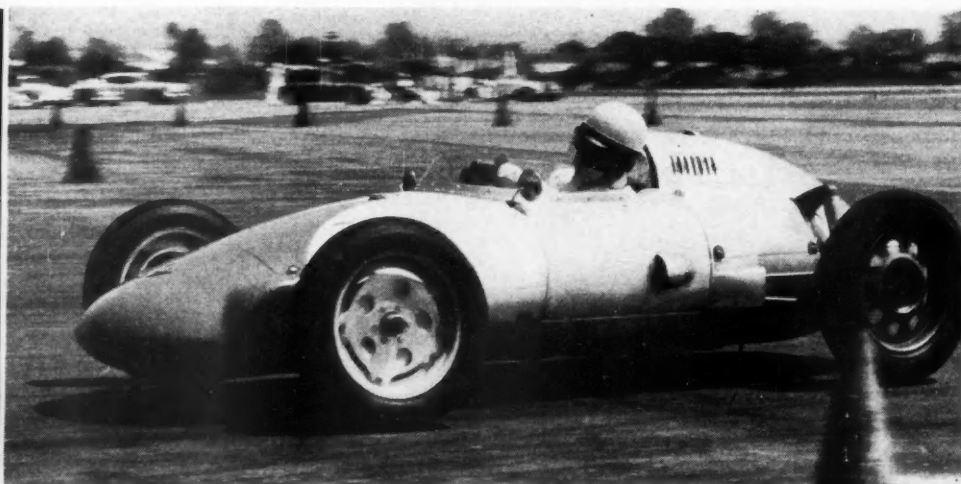
FORMULA III, the smallest of the FIA Grand Prix classes and the most fun, is, like its big brothers, a pure racing machine class. Limited to 30.5 cubic inches, light weight is a big factor in its success. MOTOR TREND's Technical Editor, Charles Nerpel, successfully combined light weight, ruggedness, and handling with comfort, safety, and speed. A tubular fuselage-type frame, swing axles in the rear and a modified VW front end, all covered with a thin aluminum streamlined body, give the 530-pound car a good foundation for its one-cylinder BSA Gold Star engine. Vibration, so emphasized with singles, has been drastically reduced through the use of aircraft-type rubber mounts, and just to be on the safe side, fuel and oil tanks are similarly hung. Patience and care, scrounging parts, "brain picking" experts, and very little actual cash finally produced a beautiful, well-proportioned little racing car that goes. Claude Hampson, the Reseda body man who has beat out more race, drag, Bonneville and sportscar bodies than he cares to count, spent a lot of his spare time with Nerpel, building sections of the .051 aluminum skin. Hampson's skill with the soft metal was so good that the body was left in its natural metal finish until recently, when paint was added to the nose to cover some rock nicks. The success of this car has stimulated other homebuilders on the West Coast and helped swell the ranks of Formula III cars.

PHOTOS BY BOB D'OLIVO



Trailing arms put suspension units farther to the front and allow more room for foot pedals.

**This is what
two years of
spare time
planning,
designing
and building
can accomplish**

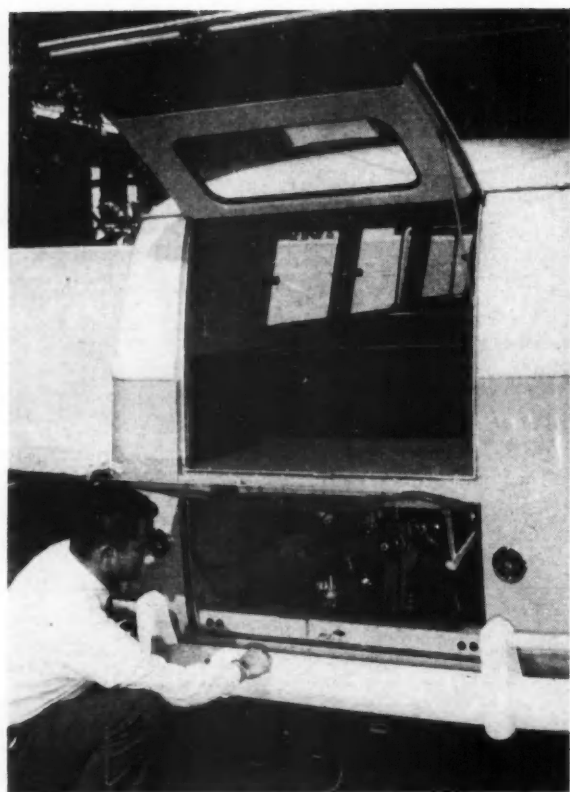


the MIGHTY MICRO



**An unusual combination in station wagon design—
utility, durability, economy and fun.**

by Wayne Thoms



VOLKSWAGEN'S MICROBUS, or station wagon if you prefer, has had many unflattering appellations tacked to it: ugly, top-heavy, slow, rough-riding, uncomfortable and others less polite. Some of these may have a grain of truth, as we shall explain—but the increasing number of people operating the various models of VW transporters indicate that beauty is more than skin deep.

To obtain some insight into VW's "platform on wheels," we subjected a new Micro to some of the roughest terrain and driving procedures we have ever asked any MT test vehicle to undergo. The results were revealing and positive. This is an amazing automobile. It is only fair to add that I have been operating a Micro as part of my personal transportation for a year and knew most of the answers before we started.

First of all, don't ever bet on the length and wheelbase of a Micro because you'll probably overestimate and lose. It's the same wheelbase (94.5 inches) as the VW sedan and only a few inches longer (165 inches overall). It is deceptive because almost every inch is usable space for either passengers or luggage.

As for some of the vehicle's so-called drawbacks, let's analyze them. Ugly? You could hardly call it handsome but its design is functional. And there is a certain charm which is something like an acquired taste—it grows on you. Top-heavy? Yes, and subject to the vagaries of crosswinds. This could be partially remedied by dropping the body around the wheels instead of perching it on top, but only at the sacrifice of payload area and a ground clearance you learn to respect in rough country.

It can be considered too slow for most open highways and this is perhaps the only criticism which has any valid basis. Cruising speed is a casual 50 mph; 60 or slightly better can be squeezed out on level ground. This is simply one of the prices you must pay for

Two rear doors on Micro enclose engine and luggage compartment. Engine components are accessible although not quite as easy to work on as sedan; large luggage space will hold several suitcases.

the economical VW engine with its huge built-in safety factor.

A comfortable ride is often a matter of opinion. The front seat of the Micro is directly over the front wheels; therefore it receives more than its share of jounce and pitch. The ride in the rest of the vehicle is as good as or better than most passenger cars. Four wheels independently sprung with torsion bars are the happy combination, which does not produce a marshmallow ride yet does give firm riding comfort.

But who needs it? The answer depends solely upon the needs of the individual. What the Micro will do and do well should be the deciding factor. One of the first criteria in judging any station wagon is its cargo and passenger space. VW's Micro is one of the few designed to carry eight adults in comfort plus 28 cubic feet of luggage—enough for 16 average-size suitcases. Rated payload is 1632 pounds, roughly the same as a half-ton pickup. Remove the center seat—a simple four-bolt operation—and there is an additional 170 cubic feet for freight with passenger capacity reduced to five.

A point that is seldom raised by owners of the smaller imports is the amount of time they spend being "defensive drivers." Too many Detroit pilots enjoy asserting their sheer bulk and momentum, knowing that they can rudely bluff their way past a smaller car. The Micro is seldom on the receiving end of such treatment. Even though it is a small car it looks big and that seems to be enough to win the battle. As we said before, appearances are deceiving.

It remains one of the easiest cars we know to park and maneuver through traffic. Visibility is second only to a Greyhound bus. You literally look over traffic. Steering, controlled by the near-horizontal wheel, is precise, neither too heavy nor too light. A function of driving comfort is the seating position, best described as chair-height. The seat is fixed and so cleverly designed that five-foot females and lanky six-footers find equal comfort. More important, both are able to reach the pedals without stretching or being unduly cramped.

It may seem a trifle absurd to bring out the fact that Micros are equipped with a functional hand crank. But batteries do fail.

We discovered that the battery in our personal Micro had been neglected through careless service and it was a pleasure to be able to spin the crank a half-turn rather than pay a mechanic to hitch up a booster battery. (Until this year, Micro bumpers were too delicate to be pushed for starting. Currently, heavy-duty bumpers with guards are optional.)

Mechanical components on the Microbus are geared to budget operation. We have spoken with commercial operators who are cutting gasoline bills by considerably more than one-half. And it doesn't stop there. A VW engine rarely uses any oil, at least for the first 60,000 miles or so. Since it holds only $2\frac{1}{2}$ quarts, oil changes are no burden. As with any automobile, parts wear out and sometimes break, but repairs and maintenance are among the cheapest in the import field and considerably below more complex domestic cars. One VW weak point which should be mentioned is the tendency of crankshafts to break, and for an easily defined reason. Continuous running past the red-line is what does it. If the vehicle is operated within its rated limitations, this is not a factor to worry about.

We found our gasoline mileage varying between 20.3 and 22.3 mpg. Economy cannot be as good as the sedan's for several reasons. The Micro is heavier and puts up a substantially large and flat frontal area. Finally, there are reduction gears in the rear wheels which give better pulling power, but make the engine rev faster than for comparable sedan speeds.

There isn't much in the way of uncharted terrain that will stop a Microbus. We took the test Micro through some back country which should be attempted only by a four-wheel-drive vehicle. Some of the steep grades and rough trails play more havoc with driver and passenger nerves than they do with the machine. If you have the courage to press on, the Micro will probably make it.

Is it a good buy? At \$2425 p.o.e. we believe it is. And we can honestly say that testing the 1959 Micro was fun. The fact that we can say it after putting 13,000 miles on a '58 indicates that the car must be something special. The VW Microbus is.



Optional heavy-duty bumper with guards, spring-loaded retractable step for center door and new color schemes are only visible changes in '59 Micro—a good example of a successful design continued.



Graphic evidence that eight adults can ride with more than ample hip-, head- and legroom. Directly over wheels, front seat gets more than its share of bounce. Ride in rest of Microbus is excellent.

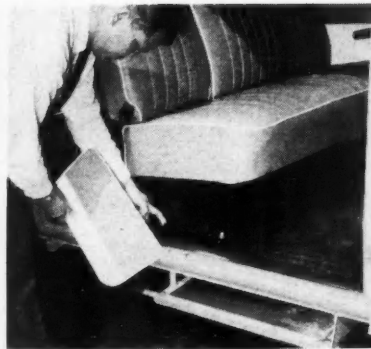
PHOTOS BY BOB D'OLIVO AND COLIN CREITZ



Choke, fuel reserve and heater knob are centered below seat within easy reach of driver. Tools are under seat, spare behind backrest.



Girls find that first step to ground a long one, especially if they wear tight skirts. Graceful exit is difficult and requires practice.



Panel on center seat snaps out for access to four bolts holding it to floor. With seat removed there are 170 cubic feet for freight.

the DEEN of CAL SALES

by David Saunders

THE SUCCESS STORY of Triumph cars in the United States began in the West, specifically in California.

Chapter I started at the Ambassador Hotel in Los Angeles less than five years ago when Dorothy Deen, executive vice-president of Cal Sales, Inc., now the world's largest Triumph distributor, was hostess at the party introducing the TR-2.

The world was not waiting for this new bomb. The introduction was merely a preliminary splash, and Dorothy had to find dealers. She finally found three, who are still Triumph dealers, and are the nucleus of the present network of 200-plus franchise holders in the West.

The pretty blonde cause of it all delivered the 10,000th Triumph sportscar in the West a few weeks ago. Now she is building the Triumph sedan and estate wagon into principal contention in their field in her territory in less than a year since their introduction.

So how come a gal becomes an automotive tycoon, the most prominent example of her sex in a rough 'n' tough man's business?

The short, happy history of Dorothy Deen's success began in high school with her first car, continued through UCLA, and into the business world. Her father, Arthur Andersen, was a successful manufacturer. Dorothy learned technicalities from him, eventually joined the family business. Later, she went into the sportscar accessories business to provide niceties the stark early models lacked.

Her interest in cars, scooters and anything wheeled grew instead of diminishing. She bought one of the first MG-TDs in the U.S. That was followed by a collection of varied sportscars. She has always strummed the theme, "Wherever you go, it's more fun in a Triumph."

As the accessories business she shared with her father progressed, she looked for a car to distribute. There wasn't one available. So she took an active part in designing one—the now-classic Doretti named after her and built in England by Swallow.

The new Triumph TR-2 was introduced in England while Dorothy was shopping in Europe for another import to follow the Doretti. She nailed down Western U.S. distribution and began preparations for the introduction.

The march of Triumph was a slow walk in the beginning. It was a few years late in the field and needed yeoman effort to compete with its forerunners. Then the TR began its successful road racing and rally career, here and abroad. Its performance at Le Mans, in the Alpine, at Elkhart, and in other major international events here and abroad helped get new dealers, make new sales.

With the Triumph sportscar established as a best-seller (last in 1954—now second in national sportscar sales), Dorothy extended the Triumph line a year ago with the new sedans and estate wagons.

The original company is now three corporations: Cal Sales, Inc.; Cal Services, Inc.; Cal Specialties, Inc. The first Cal Sales building is now five, with three huge lots added to give temporary housing to the sportscars, sedans and wagons as they make a short stop between ship and dealer. The cars are still in short supply and already sold to dealers before their arrival from Coventry. The only TR-3s at Cal Sales at this writing are those which are staff-owned. Personnel has increased over three times since the end of the first year of Cal Sales existence.

In the vital statistics department, the architect of the Cal Sales success story is, as we



Dorothy Deen

said before, blonde, pretty, high-powered, has good weight-to-wheelbase ratio, and is in her mid-30s. A sense of humor, unexpected with all that efficiency, insight and foresight, makes one wonder if Dorothy's a real tycoon. But then the record proves that she is indeed the Golden Girl of the Western sportscar scene.

The fair Miss Deen is not all business, however. She has hobbies, of which cooking is one. She lives in the hills above the Sunset Strip in a house she raised from a wreck to a showplace. She loves animals, adopted two undernourished homeless dogs, which are her present pets. She would love to own a chimpanzee but doesn't because she dreads the thought of giving it up eventually, which one must do when the chimp is six or seven years old. Most of her friends are in the world of sportscars and sportscar racing, the latter of which is forbidden to her by company contract.

Her proudest moment? When the representative of the TR-3's principal competitor congratulated her for beating them in California sales three months in a row.

The Deen of Cal Sales stands between Triumph's new 1959 standard-bearers: the station wagon and the sedan.



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MOTOR TREND



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SPEND MORE...on Cigarettes, Toiletries, Sporting Goods, Car Accessories...and Dining out.

RELAX AND HAVE FUN - 8% own outboard motor boats. 53% consume 4-15 soft drinks each week.

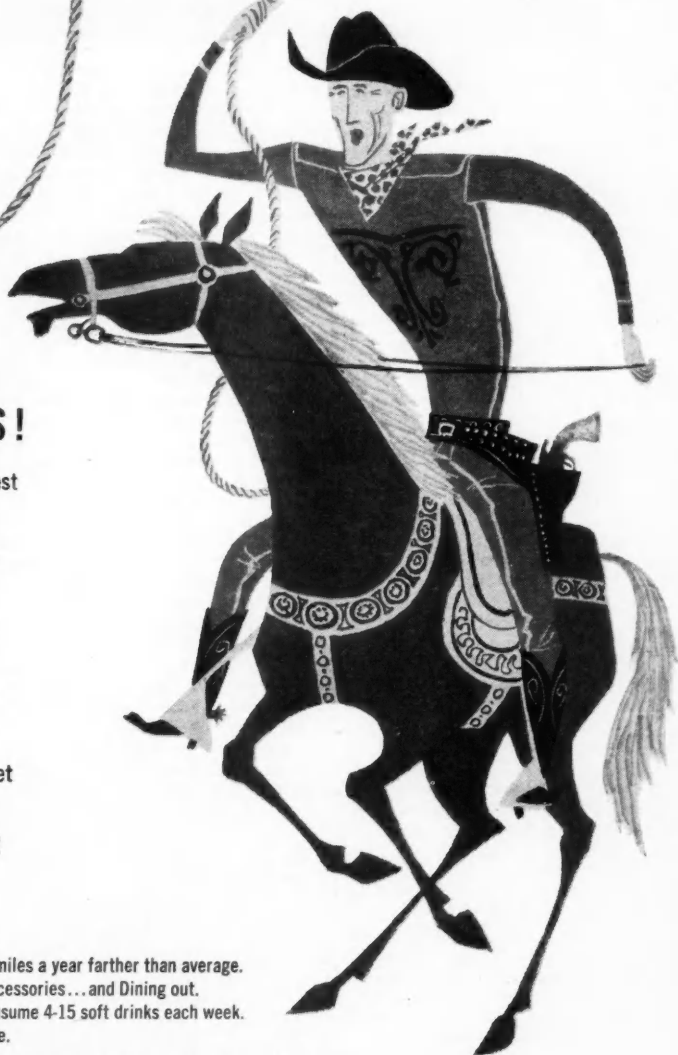
BUY QUALITY CLOTHES - 95% buy suits and shirts by brand name.

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Thru the Lens

with Lester



SPORTSCAR RACING had its greatest day in the United States on October 12th when a crowd estimated at 100,000 crammed into California's Riverside Raceway for the first U.S. Grand Prix, but it's too bad that the Sports Car Club of America set down those 69 drivers, the amateurs who competed in the two amateur races of the U.S. Grand Prix program for trophies only . . . The SCCA looks the other way at Sebring and Nassau, and would have been friendly to the ill-fated, but pro, American Rally . . . No wonder all this upheaval in this large organization's outposts . . . For instance, the San Francisco Region of the Sports Car Club of America, the third largest in that group, with 600 members, voted recently 173 ayes to 12 nays to support their Board of Directors' past and future decisions . . . What the S.F. Region wants the SCCA Westport overlords to do is to liberalize their policies in the promoter hassle . . . Regional Executive Clark McCartney of San Francisco has been elected to the National Board of Governors (Governor of Area 10) and has presented to Westport a resolution to change the antiquated SCCA bylaws . . . It is estimated that the San Francisco region during the 1958 season contributed in excess of \$10,000 to the National SCCA coffers . . . If you were in business would you kick that much moola out the window? . . . Further action of the SCCA at this writing is awaiting the first meeting of the 1959 National Board of Governors . . . Stubborn adherence to an outmoded set of bylaws is costing the SCCA much prestige, loss of money, loss of courses, and loss of drivers in the West.

Meanwhile, the California Sports Car Club, strongest in the West with over 1400 members, has flexed its muscles and shown its strength . . . They helped the Los Angeles Times-Mirror Charities launch the successful (financially) U.S. Grand Prix. They liberalized their pro-amateur policy, making it possible for even European or Indy professional drivers to compete in their races. They recently voted race course selection, control and operation back to the two men who were instrumental in building up the CSCC from practically nothing to a healthy, wealthy 10-race-a-year operation, namely Joe Weissman and Ray Frug . . . They moved into Northern California and also presented a six-hour endurance type race on their two-day race program at the Pomona Fair Grounds in late November.

Aren't those earth tremors we felt on Sunday, November 2, the sportscar "eater-types" growling? For instance, Max Balchowsky's "Scarab-Eater" (with wins over Scarabs in Santa Barbara on September 1st and Minden, Nev., on October 26th) is ready to challenge the "rich kids" again . . . Maybe even in Nassau? . . . And hasn't another "eater-type" just arrived at Jay Chamberlain's Sports Car Center in North Hollywood? . . . This one, the Lotus Mark XV, a "Porsche-Eater" of 1500cc displacement from England, weighing less than 900 pounds and twice winner over the RSK Porsche in Europe . . . Entirely new rear suspension, a pivot type, is being used and the rest of the chassis has many improvements all adding to higher speed and better handling . . . Wasn't the Western Zone Supervisor of USAC's face red when he was told by higher authority to send a telegram to Lindley Bothwell, Los Angeles Regional Executive of SCCA, apologizing for the alleged ban he (the supervisor) told drivers USAC allegedly had against the SCCA's November Palm Springs Sportscar Races? . . . Higher authorities helped straighten out this mess but not until a good job of sabotaging big name driver appearances at the Spa had been completed.

The 15th running of the Palm Springs Races, jointly put on by the Los Angeles Region of the Sports Car Club of America and independent promoter George Cary, Jr., was an artistic, if not a financial, success . . . Highlighting the two-day Spa meet was the

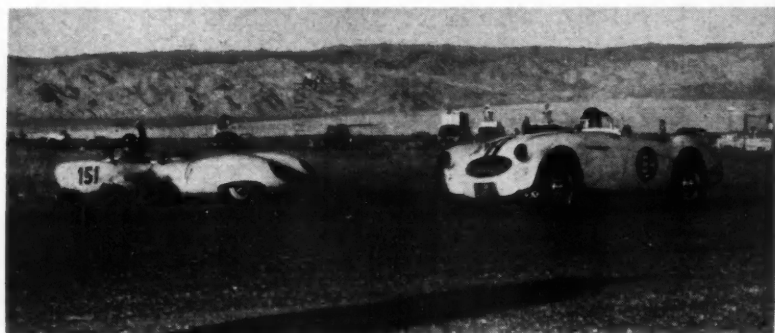
first appearance in the States of a fabulous 5.7-liter, 507-horsepower Maserati V8 in Temple Buell's Maserati sportscar . . . Piloted to an overall win by the "Texas Thin Man," Carroll Shelby, the Maserati burned rubber like a hydroplane's "rooster tail" for at least 2000 feet down the concrete runway when it took off from the start-finish line as if "rocket-propelled" . . . "Ole Shell" said: "Man, this monster must have been going 165 to 170 mph down that 4400-foot backstretch, and believe me it had plenty more left!" . . . On behalf of Temple Buell, the owner, Jim Young, the mechanic, and Carroll Shelby, the driver, this column issues a challenge to any and all of the Scarabs for a joust. How about it, "Rich Kids?"

Talking about Maseratis, isn't John Edgar prepping his Lister-Maserati (bored out to 5.7 liters) for the international competition at Nassau? . . . He will also have his old standby, the 4.9 Ferrari, and the 4.5 Maserati with the experimental GMC engine ready for the Bahamas dueling. Jim Rathman, of Florida, winner of the Monza classic, is preparing Edgar's Maser-GMC in Rathman's Florida Speed Shop . . . Reason latter car never got to the post at the Riverside Grand Prix was the failure of the pit crew to put water into the experimental engine's radiator, adding up to "one fried V8."

Talking about international racing activity, Temple Buell of Santa Barbara, Calif. and Denver, Colo., will receive over \$11,000 to race his two 2.5-liter Maserati Grand Prix cars in the Grand Prix of Auckland in New Zealand . . . Starting prizes for this one race in the down-under country total over \$20,000 . . . Since there will be two more Grand Prix races down there closely following the January 10th Grand Prix of Auckland, owner Temple Buell and drivers Carroll Shelby of Texas and Jean Behra of France stand to pick up many pounds (sterling, that is) before they return to the States in February . . . Look for another International event to be run again in 1959 . . . The Hawaiian Sports Car Races on the Island of Oahu . . . This time by two new promoters, George Cary, Jr., and Dale Stoner with the able financial backing of some wealthy Hawaiian merchants.

A funny reverse on the European machinery running in the United States situation occurred when Joe Lubin of Los Angeles flew over to the Aston Martin factory in England to check on a new 3.9-liter powerplant being

continued on page 114



Don Maslin takes his Lotus into the dirt—not by intent—during recent Palm Springs weekend.

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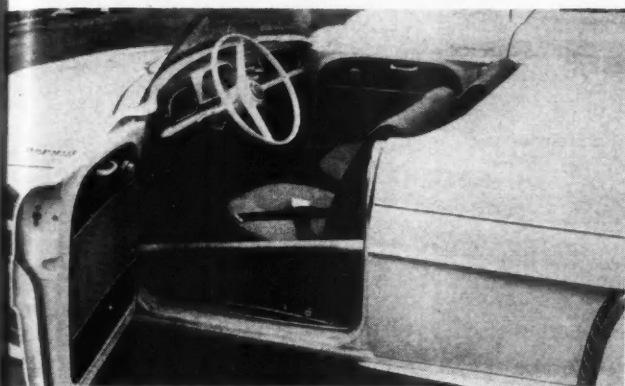
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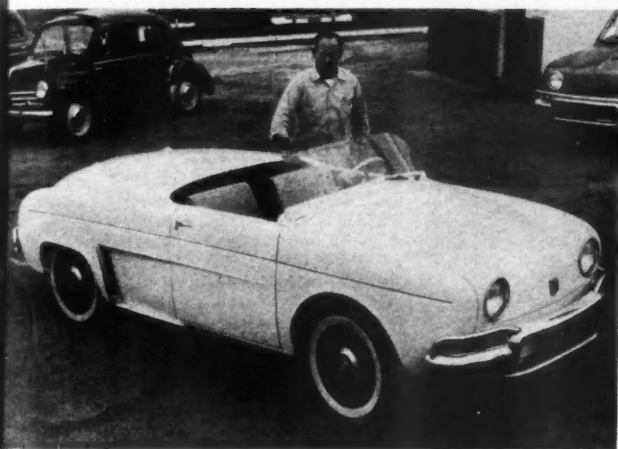
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Reinforcing bar partially blocks door opening, above, but owner experiences no difficulty in entry. Comparison with Dauphine sedan shows how removing top has completely altered car's appearance.

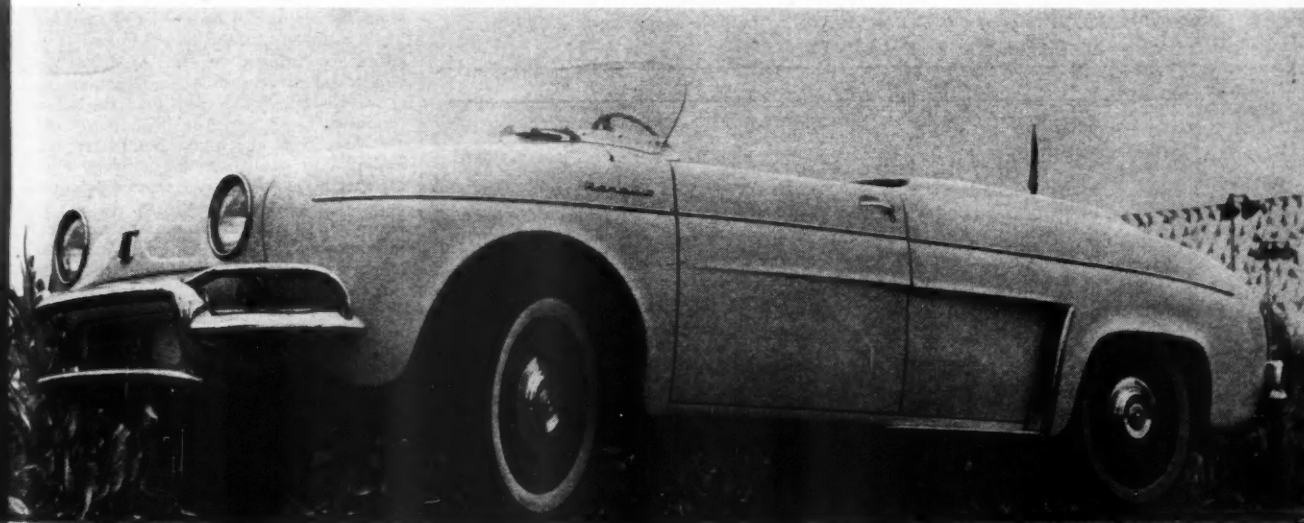


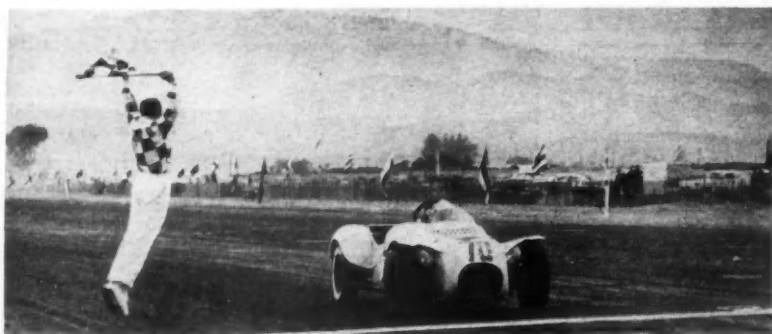
WHEN BILL FINCH, Reseda, Calif. electrician, rolled his near-new Renault Dauphine, he decided he would like something other than a repaired sedan. Enlisting the services of Reseda body builder Claude Hampson, Bill submitted a rough sketch of what he thought might look good and be reasonable to build—and turned Claude loose.

Without the top, the unit body-frame construction of the Dauphine is rather weak. The sides and sheet-metal bottom depend on the top to stiffen the structure. Hampson welded in some chrome moly tubes before fitting a crowned section of body steel, cut from the top of a domestic sedan, to complete the rear tonneau. Welding the rear doors shut, and leading and grinding the welds completed the job except for a racing-type plastic windscreen and several coats of Arctic white synthetic. This little eye-catcher is just as solid as when it was a sedan, showing no signs of twist even when angling up a steep driveway. There is plenty of luggage space under the rear covered portion but Bill has to find some seats with tilting backs before this section is easily accessible. Future plans are for some sort of top which can be snapped on quickly.

PHOTOS BY CHARLES NERPEL

RENAULT Roadster





Max Balchowsky's Buick Special, Old Yeller, takes winning flag in Minden, Nev. main event.



Geldert Brown's 300-SL, in action at Minden, was demolished in Laguna Seca three-car pile-up.



Carroll Shelby pushes Temple Buell's new 507-bp, 5.7-liter Maserati to a win at Palm Springs.

Thru the Lens

continued from page 112

assembled there to replace the Aston Martin engine he "blew" at Riverside . . . Lubin frantically phoned Transatlantic to have wrench jockey Bill Rudd send parts to the factory from L.A., namely the headers, manifold and carburetors, since the Aston Martin factory was fresh out and wanted to "dyno" the new engine . . . That's a new twist.

Latest rumbles from our rumor shaker: Chevrolet to import Italian custom-designed and built coupe bodies for installation on Chevrolet chassis with Corvette engines—a \$6000 Italian-bodied Chevrolet sports coupe with classic European styling . . . We think the combination will revolutionize the price structure of the sports coupe field . . . Maybe Texas money has something to do with this deal.

Look for young American millionaire Lance Reventlow's revolutionary new aluminum four-cylinder Grand Prix engine with dual ignition and desmodromic valves to undergo dyno tests during late December . . . The team of Jim Travers and Frank Coons, former Bill Vukovich wrench twirlers on the Howard Keck Indy car, designed this gem with top technical engineering advice from Leo Goosens of the Meyer-Drake firm . . . Chassis and frame assembly started on the new Grand Prix Reventlow car the first week in November with a projected mid-January road test date.

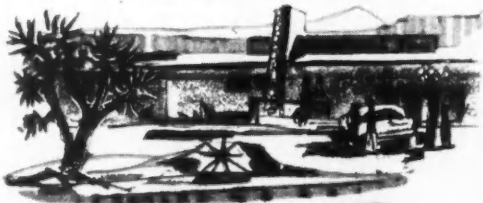
Trackside operative "XYZ" informs us that during the course of tire tests at Riverside Raceway by Reventlow Automobiles, Inc., about the 1st of November, Chuck Daigh, engine expert of the Reventlow team and one of the top three American sportscar drivers in my book, set a blistering new one-lap course record. He lowered the fastest recorded one-lap time of 2:04.1 to 2:00.6 during a trial run. The 2:04.1 mark was made during the U.S. Grand Prix qualifying runs and was also set by Chuck Daigh's rapid Reventlow Scarab.

A weekend of sportscar racing Nov. 8th and 9th on the Laguna Seca course near Monterey was marred by a series of accidents which took their toll of machinery and casualties. On Saturday, an MG-A, driven by Eugene Smith, went through a fence into the crowd injuring Smith and four spectators, fortunately none seriously. The fence was well back from the course but the surface leading to it was loose and slippery. Sunday's big-bore production race was red-flagged after a spectacular pile-up which gravely injured Ace-Bristol driver Gordon Crowder. Cars involved were Crowder's, Geldert Brown's Mercedes 300-SL roadster and Andy Nielsen's XK-150 Jaguar. In separate accidents Chuck Lowry was injured when thrown from his rolling Morgan, and a DB coupe entered by Claude Maurel flipped and was demolished. An estimated 30,000 spectators saw Lance Reventlow and Chuck Daigh, in a pair of expensive Scarabs, finish one-two in the big-car main. Jack McAfee and Ken Miles, old Porsche Spyder rivals, copped the first two places in the under-2000cc modified event. . . . Lester "The Road Tester"

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**MT
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ISSUE!**

